CR-IR346RU Service Manual

Checks, Replacement and Adjustment of Parts (MC)

CR-IR346RU Service Manual – Contents

Checks, Replacement and Adjustment of Parts (MC)

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11.6 DRV12A Board MC-217
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Control Sheet

Issue date	Revision number	Reason	Pages affected
10/10/2000	00	New release (FM2887)	All pages
08/30/2001	01	Support for software version A05 (FM3058)	MC–2–4, 6, 8, 21, 32, 33, 59.1–59.4, 63, 122, 134, 138, 139, 150, 151, 151.1–151.4, 152–157, 164, 165.1–165.4, 178, 186–251

1. Check/Adjustment Procedures for Each Unit

Precautions for Check, Replacement, and Adjustment

- In this volume, descriptions are omitted regarding components that do not require special attention or adjustment during their removal/reinstallation. For removal procedures for such components, refer to the Parts List Volume.
- When performing check/replacement/adjustment procedures on the machine, the following precautions should be observed.

WARNING

To avoid electric shock hazards, power OFF the machine before performing the procedures.

WARNING/CAUTION

Observe the warnings and cautions described in the "Safety Precautions."

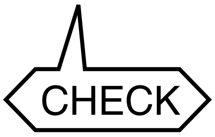
CAUTIONS

- *When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.*
- *Do not remove the cover of the scanning optics unit.*
- *Never remove the red-painted screws.*

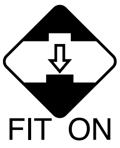
◆ ***INSTRUCTION*** ◆

Some of the illustrations in this volume contain check/adjustment and half-punch indicators as needed.
For removal and reinstallation, perform the procedures as instructed by such indicators.

- *Check/Adjustment indicator:* *Indicates that it is necessary to check or adjust the installation location when the part or component removed is to be reinstalled.*
  This indicator is placed in the illustration that depicts the procedures for removing the parts and components.
  When you see this indicator, refer to its relevant "■ Check/Adjustment Procedures."

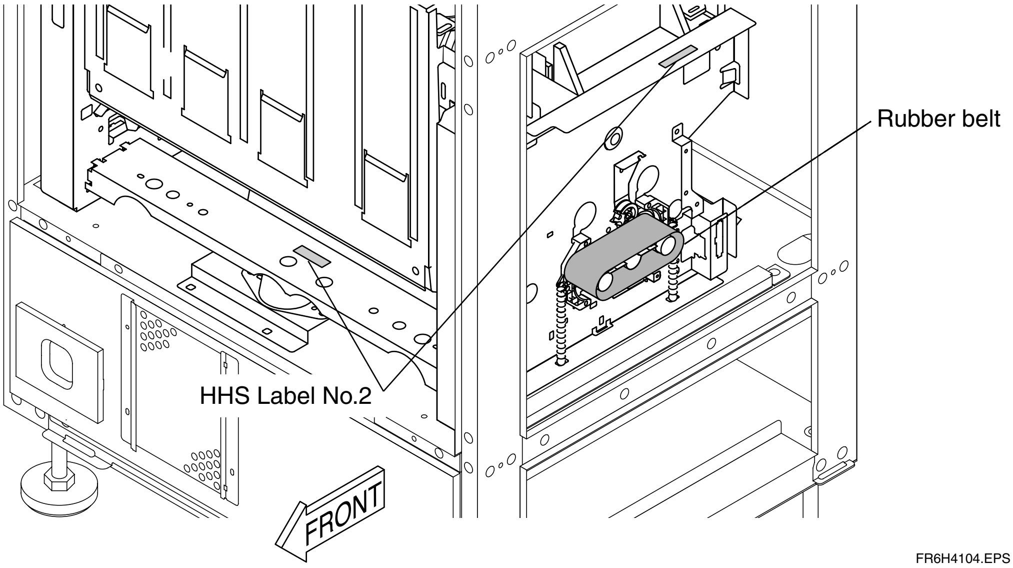


- *Half-punch indicator:* *Indicates that it is necessary to align the half-punches when installing the parts or components.*
  However, it is not indicated for the half-punches for improving ease of assembly or preventing erroneous assembly procedures.



◆ INSTRUCTIONS ◆

- *Never remove the rubber belt of the subscanning unit, except for its replacement.*



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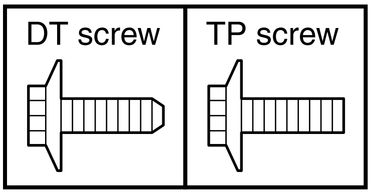
- *The yellow-painted screws require adjustments when components are reinstalled. When reinstalling the components, follow the check/adjustment procedures.*

◆ NOTE ◆

The TP screw used to secure the ground wire is similar in shape to a DT screw. When attaching the screw, check its shape to avoid confusing it with a wrong one.



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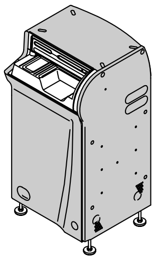
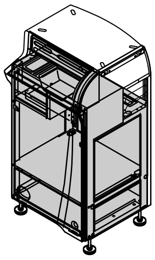
3. Covers



3. Removing and Reinstalling the Covers MC-8
- 3.1 Covers MC-8

4. Housings



4. Removing and Reinstalling the Housings MC-10
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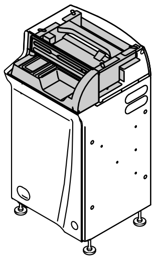
- 4.2 Inverter Assembly MC-12
- 4.3 Fan (FAN4) MC-14
- 4.4 INV12A Board MC-16
- 4.5 Fan (FAN3) MC-18

5. Cassette Set Unit



5. Removing and Reinstalling the Cassette Set Unit MC-20
- 5.1 Shelf Cover Assembly MC-20
- 5.2 Shutter MC-22
- 5.3 Cassette Set Unit MC-24
- 5.4 Wrong-Insertion Prevention Bracket Assembly MC-26
- 5.5 Solenoid (SolA1) MC-28
- 5.6 Hold Pin MC-30
- 5.7 Inch/Metric Changeover Guide MC-32
- 5.8 Suction Sensor (SA5) MC-34
- 5.9 Suction Cup MC-36
- 5.10 IP Removal Arm MC-40
- 5.11 Motor (MA1) MC-42
- 5.12 Roller MC-44
- 5.13 Guide Plate MC-48
- 5.14 Stopper MC-50
- 5.15 Actuator (Cassette IN Detection) MC-52
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- 5.17 Roller Assembly MC-56
- 5.18 Movable Guide Assembly MC-58
- 5.19 Sensor (SA3) MC-59.1

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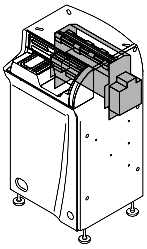
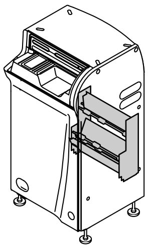
6. Erasure Conveyor



6. Removing and Reinstalling the Erasure Conveyor MC-60
6.1 Erasure Conveyor MC-60
6.2 Lamp Assembly MC-62
6.3 Thermal Switch (TSWB1) MC-66
6.4 Lamp MC-68
6.5 Lamp Socket MC-72
6.6 Thermistor MC-76
6.7 Duct Box MC-78
6.8 Cleaning Roller Assembly MC-80
6.9 Timing Belt MC-82
6.10 Motor (MB1) MC-84
6.11 Rubber Rollers A and B MC-86
6.12 Rubber Rollers C and D MC-88
6.13 Rubber Rollers E and F MC-90
6.14 Rubber Rollers G and H MC-94
6.15 Guides A and B MC-98
6.16 Guide C MC-100
6.17 Guide D MC-102

7. Side-Positioning Conveyor



7. Removing and Reinstalling the Side-Positioning Conveyor MC-104
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7.2 Timing Belt MC-106
7.3 Grip Mechanism (Left-Hand Side) MC-108
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7.6 Lower Grip Roller MC-114
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7.8 Motor (MC3) MC-119
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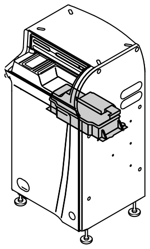
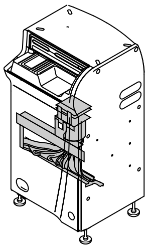
7.11 Latch Assembly (Right-Hand Side) MC-126
7.12 Movable Guide MC-128
7.13 Upper-Stage Guide MC-130

8. Scanning Optics Unit



8. Removing and Reinstalling the Scanning Optics Unit MC-132
8.1 Scanning Optics Unit MC-132

9. Light-Collecting Unit



9. Removing and Reinstalling the Light-Collecting Unit MC-136
9.1 Light-Collecting Unit MC-136
9.2 PMT12A Board MC-142

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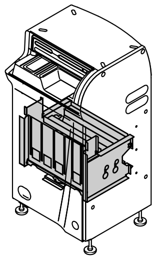
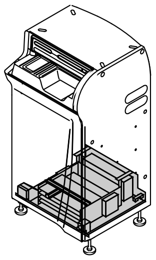
10. Subscanning Unit



10. Removing and Reinstalling the Subscanning Unit MC-144
10.1 Subscanning Unit MC-144
10.2 Kapton® Belt MC-146
10.3 Flywheel MC-148
10.4 Solenoid (SolZ1) MC-150
10.5 Motor (MZ1) MC-152
10.6 Motor (MZ2) MC-158
10.7 Motor (MZ3) MC-162
10.8 Sensor (SZ5) MC-164
10.9 Driving-Shaft Grip Release Arm MC-166
10.10 Driven-Shaft Grip Release Arm MC-170
10.11 Driving-Shaft Grip Roller (Upper) MC-172
10.12 Driven-Shaft Grip Roller (Upper) MC-174
10.13 Light-Collecting Mirror MC-176
10.14 Light-Collecting Shaft MC-180

11. Controller



11. Removing and Reinstalling the Controller MC-182
11.1 Controller MC-182
11.2 Replacing the CPU12A Board MC-186
11.3 SCN12A Board MC-212
11.4 DRV12A-1 Board MC-214
11.5 SNS12A Board MC-216
11.6 DRV12A Board MC-217
11.7 MTH12A Board MC-218
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11.9 Reset Switch MC-222
11.10 CNN12A Board MC-224
11.11 Power Supply Socket MC-226
11.12 Breaker MC-228
11.13 Fans (FAN1 and FAN2) MC-232

12. Fuses

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12.2 SCN12A Board Fuses MC-237
12.3 SNS12A Board Fuses MC-238
12.4 DRV12A Board Fuses MC-239

13. Version Updating

13. Version Updating Procedures MC-240
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13.2 Procedures for Updating the Version of the CR-IR346RU Application Software MC-245

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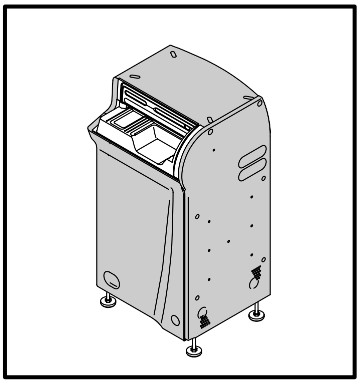
3. Removing and Reinstalling the Covers

3.1 Covers



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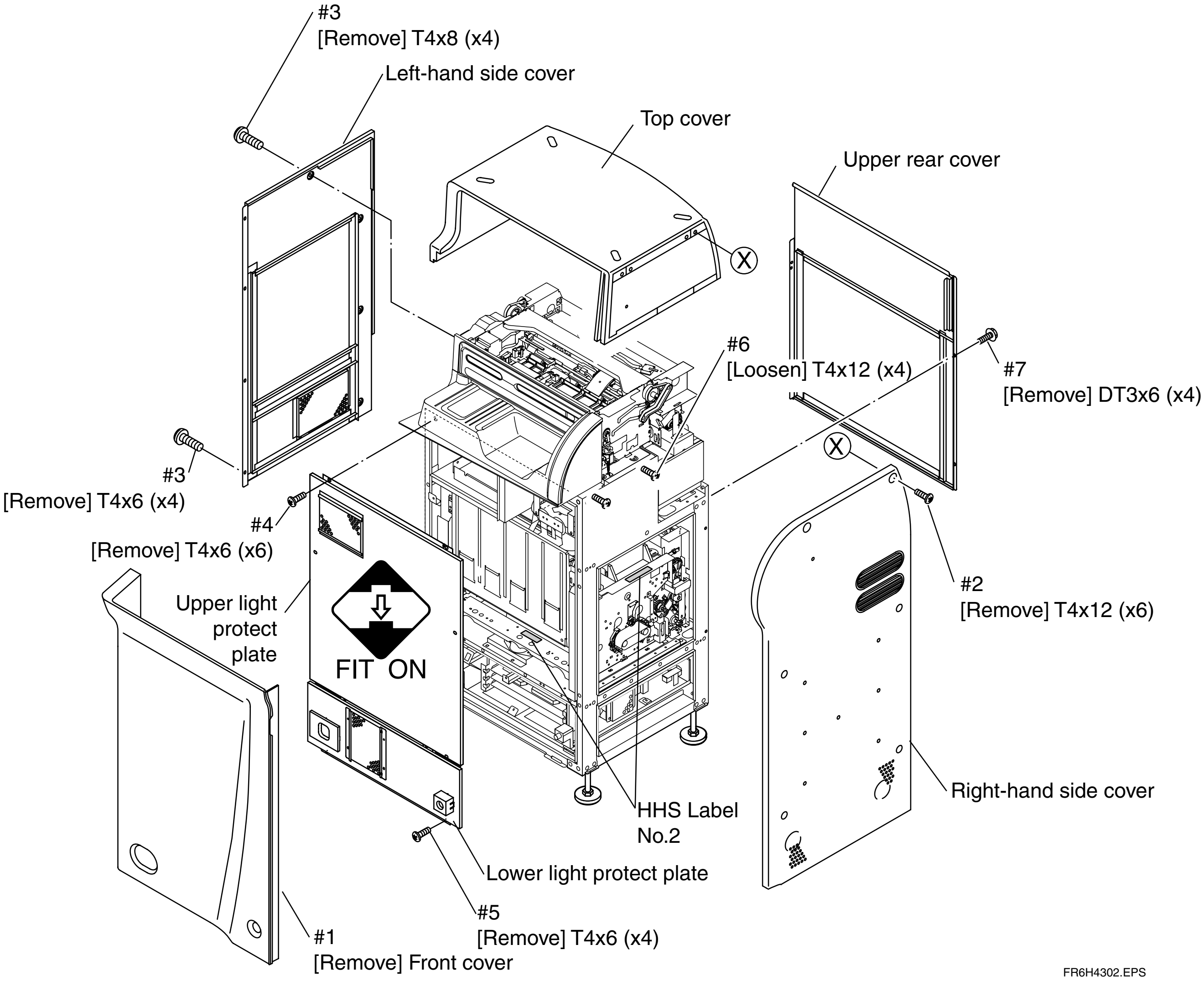
■ Removal Procedures

(1) Remove the covers.


#3
[Remove] T4x8 (x4)
Left-hand side cover
Top cover
Upper rear cover
#6
[Loosen] T4x12 (x4)
#7
[Remove] DT3x6 (x4)
#3
[Remove] T4x6 (x4)
#4
[Remove] T4x6 (x6)
Upper light
protect
plate
FIT ON
#2
[Remove] T4x12 (x6)
Right-hand side cover
HHS Label
No.2
Lower light protect plate
#5
[Remove] T4x6 (x4)
#1
[Remove] Front cover

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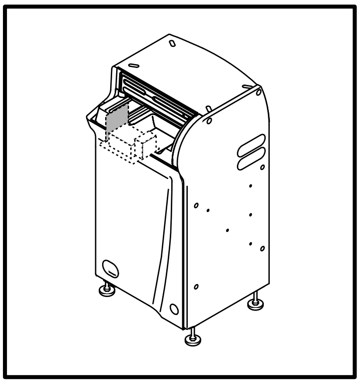
■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

4. Removing and Reinstalling the Housings

4.1 INV12B Board



FR6H4B51.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electric parts on the board.

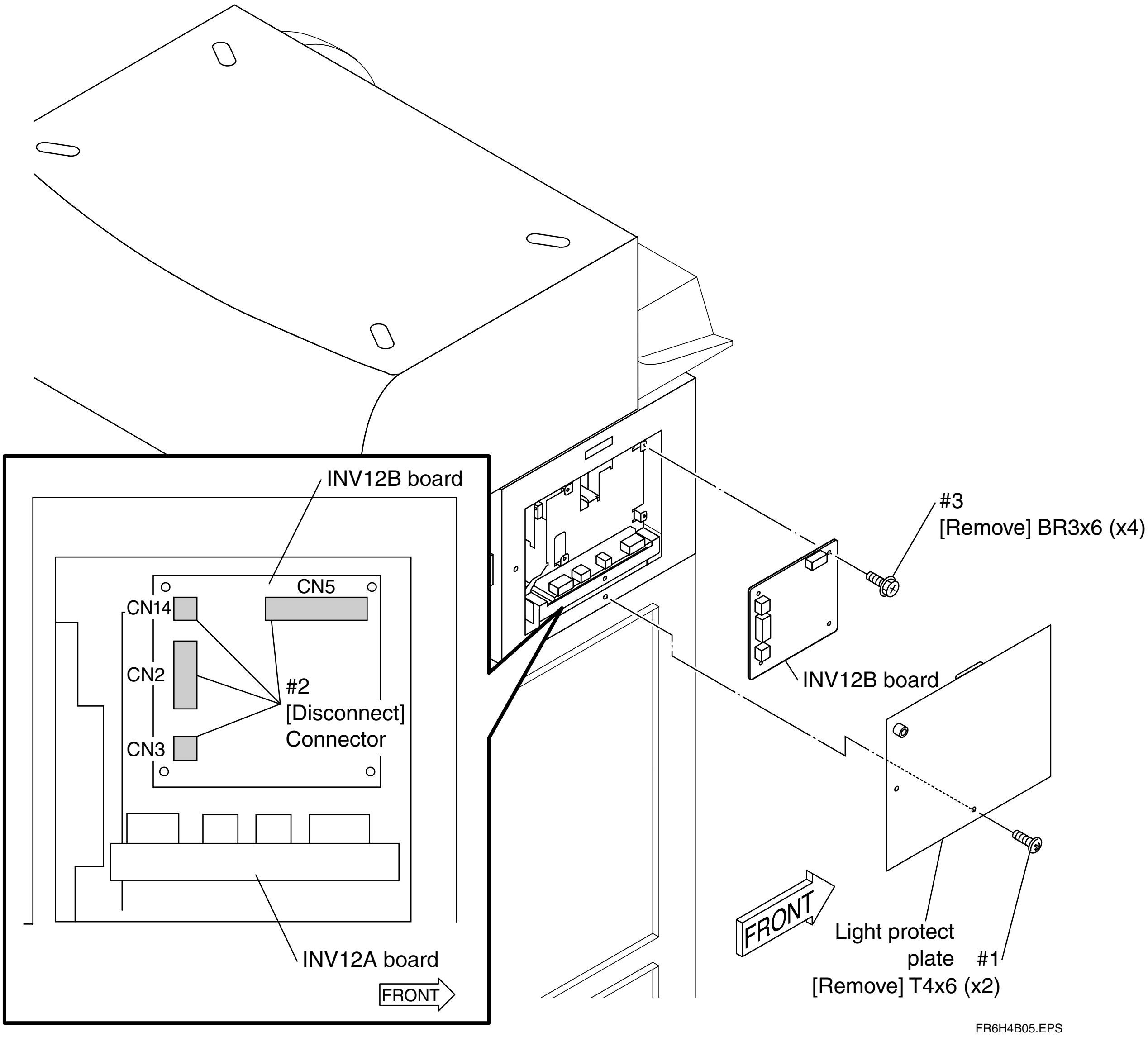
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Left-hand side cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the INV12B Board.

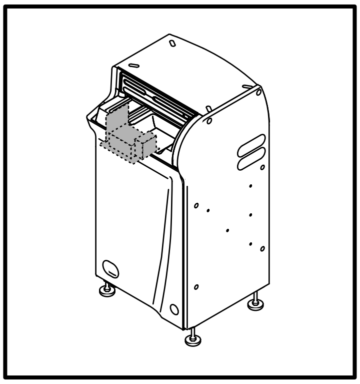

INV12B board
CN5
CN14
CN2
CN3
#2
[Disconnect]
Connector
INV12A board
FRONT
#3
[Remove] BR3x6 (x4)
INV12B board
FRONT
Light protect
plate
#1
[Remove] T4x6 (x2)

FR6H4B05.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

4.2 Inverter Assembly



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CAUTION

When servicing the inverter assembly, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electric parts on the board mounted in the inverter assembly.

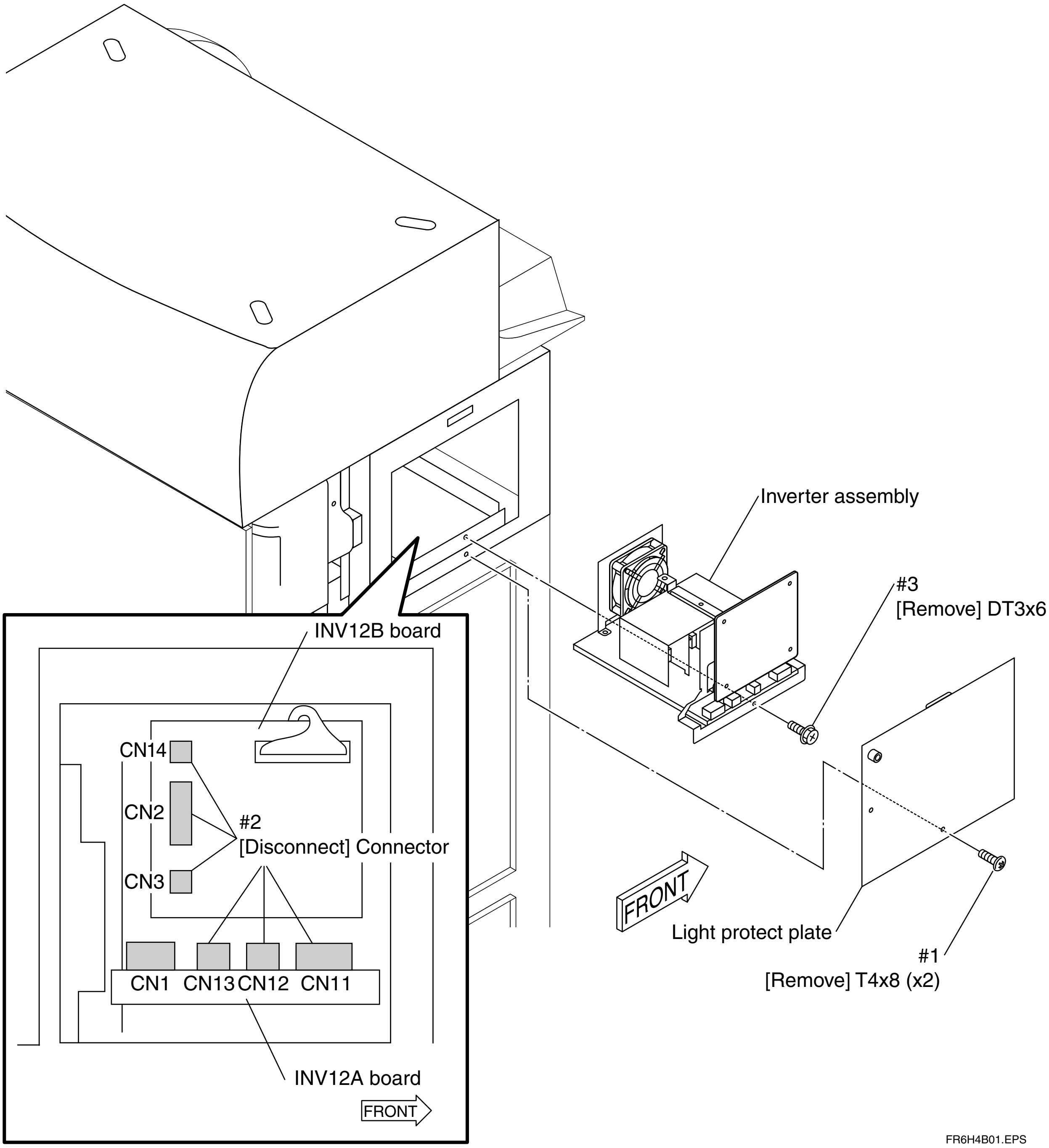
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Left-hand side cover

☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the inverter assembly.

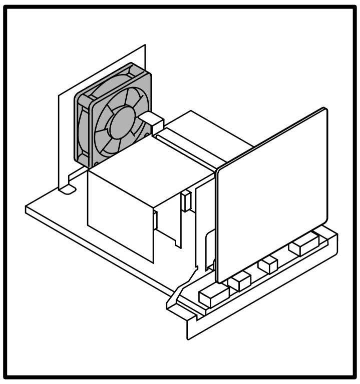

Inverter assembly
#3
[Remove] DT3x6
INV12B board
CN14
CN2
#2
[Disconnect] Connector
CN3
CN1
CN13
CN12
CN11
INV12A board
FRONT
FRONT
Light protect plate
#1
[Remove] T4x8 (x2)

FR6H4B01.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

4.3 Fan (FAN4)



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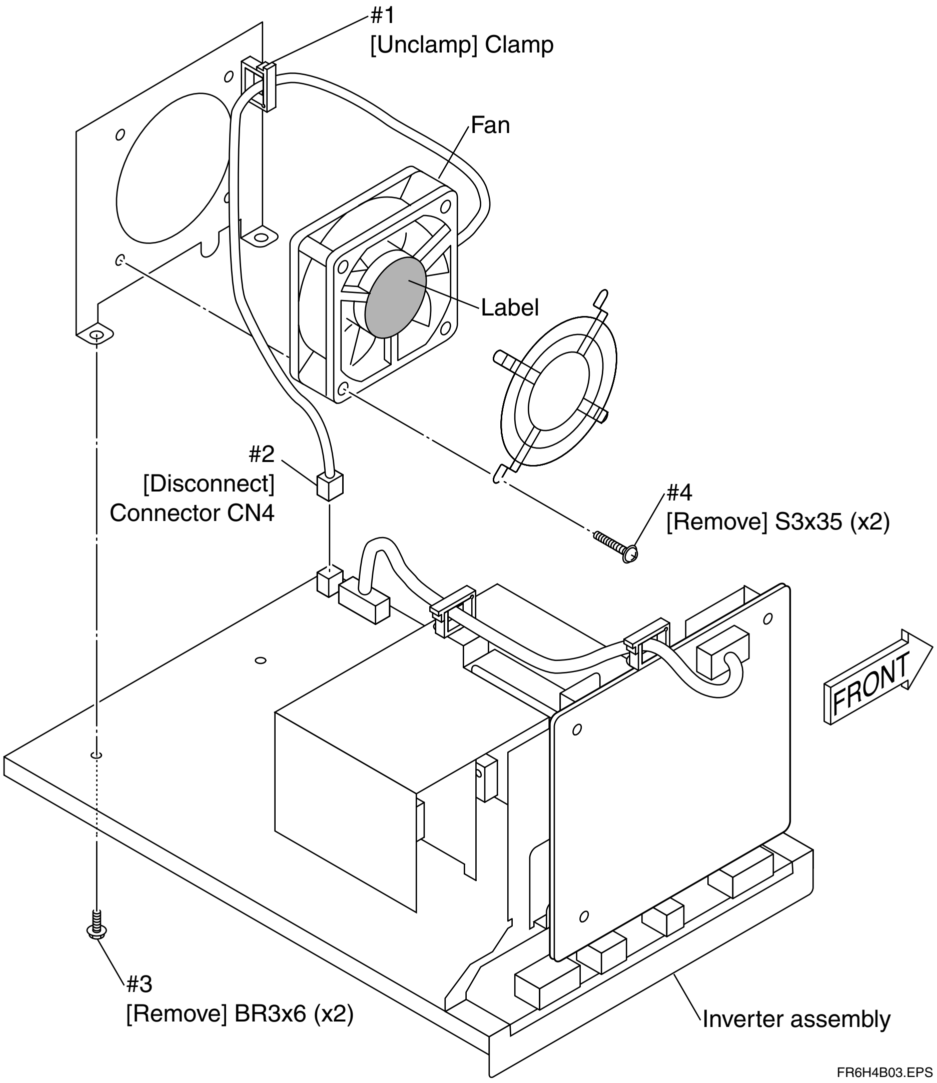
■ Removal Procedures

(1) Remove the inverter assembly.

☞ "4.2 Inverter Assembly"

(2) Remove the fan.


#1
[Unclamp] Clamp
Fan
Label
#2
[Disconnect]
Connector CN4
#4
[Remove] S3x35 (x2)
FRONT
#3
[Remove] BR3x6 (x2)
Inverter assembly
FR6H4B03.EPS

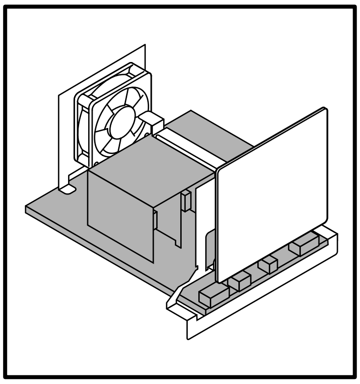
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the fan, make sure that the label of the fan is oriented as shown in the illustration above.

For reinstallation, reverse the removal steps.

4.4 INV12A Board



FR6H4B55.EPS

CAUTION

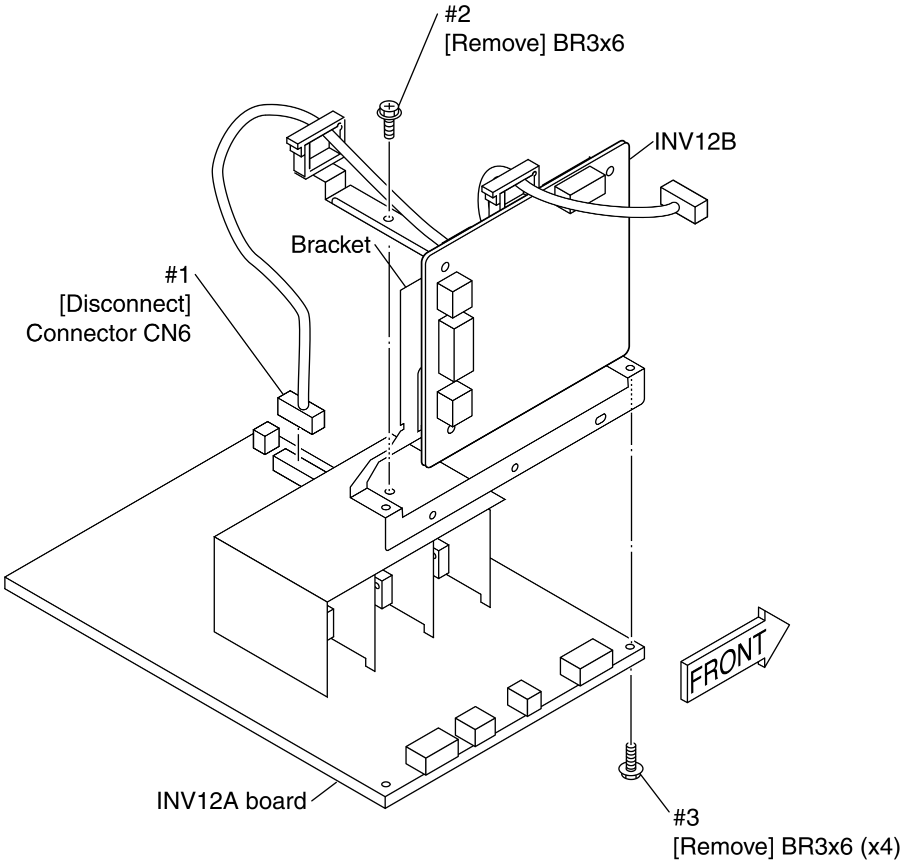
When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electric parts on the board mounted in the inverter assembly.

■ Removal Procedures

(1) Remove the fan (FAN4).

☞ "4.3 Fan (FAN4)"

(2) Remove the INV12A board.


#2
[Remove] BR3x6
INV12B
Bracket
#1
[Disconnect]
Connector CN6
FRONT
INV12A board
#3
[Remove] BR3x6 (x4)

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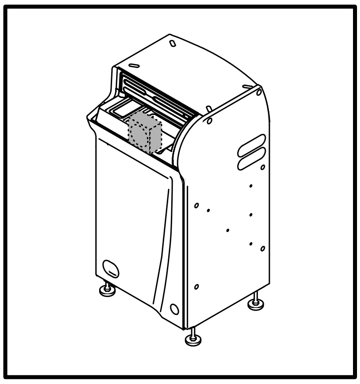
■ Reinstallation Procedure

For reinstallation, reverse the removal steps.

4.5 Fan (FAN3)



FR6H4B54.EPS

■ Removal Procedures

(1) Remove the inverter assembly.

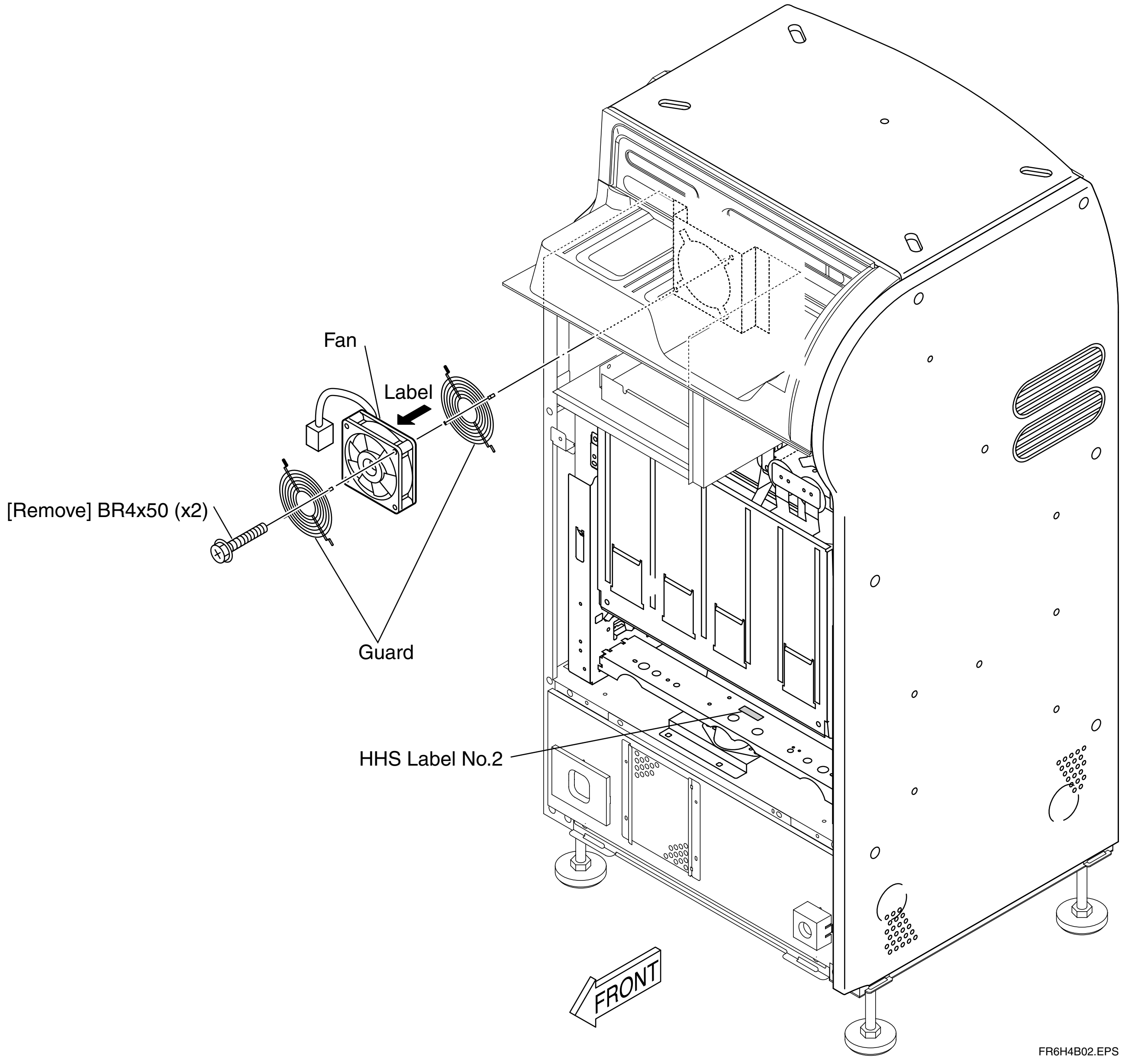
☞ “4.2 Inverter Assembly”

(2) Remove the covers.

- Front cover
- Upper light protect plate

☞ “3.1 Removing and Reinstalling the Covers”

(3) Remove the fan.


Fan
Label
[Remove] BR4x50 (x2)
Guard
HHS Label No.2
FRONT
FR6H4B02.EPS

■ Reinstallation Procedures

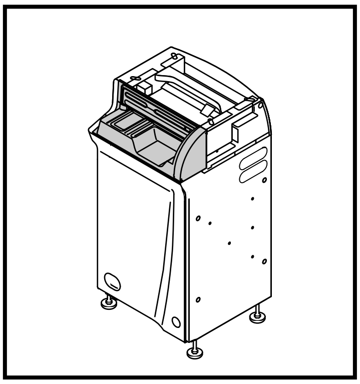
◆ *INSTRUCTION* ◆

When installing the fan, make sure that the label of the fan is oriented as shown in the illustration above.

For reinstallation, reverse the removal steps.

5. Removing and Reinstalling the Cassette Set Unit

5.1 Shelf Cover Assembly



FR6H4442.EPS

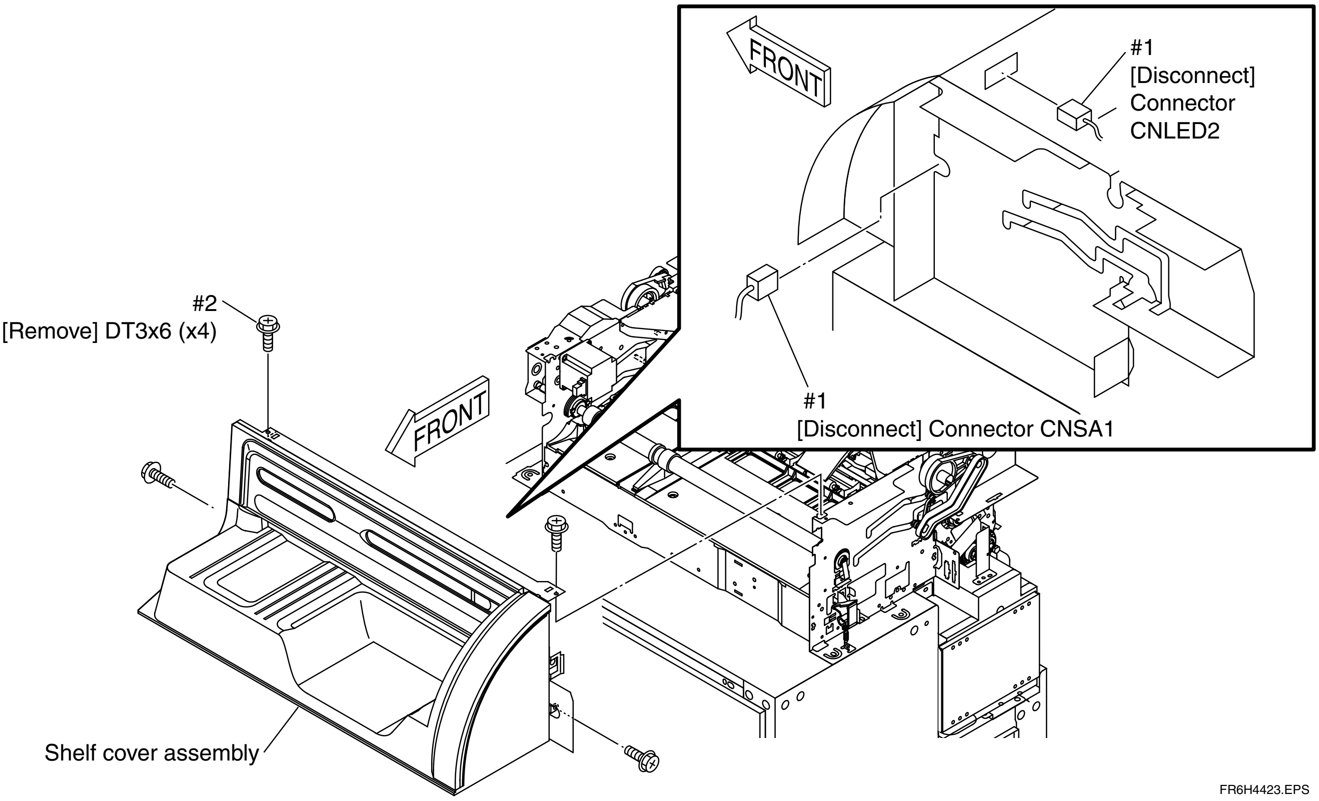
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

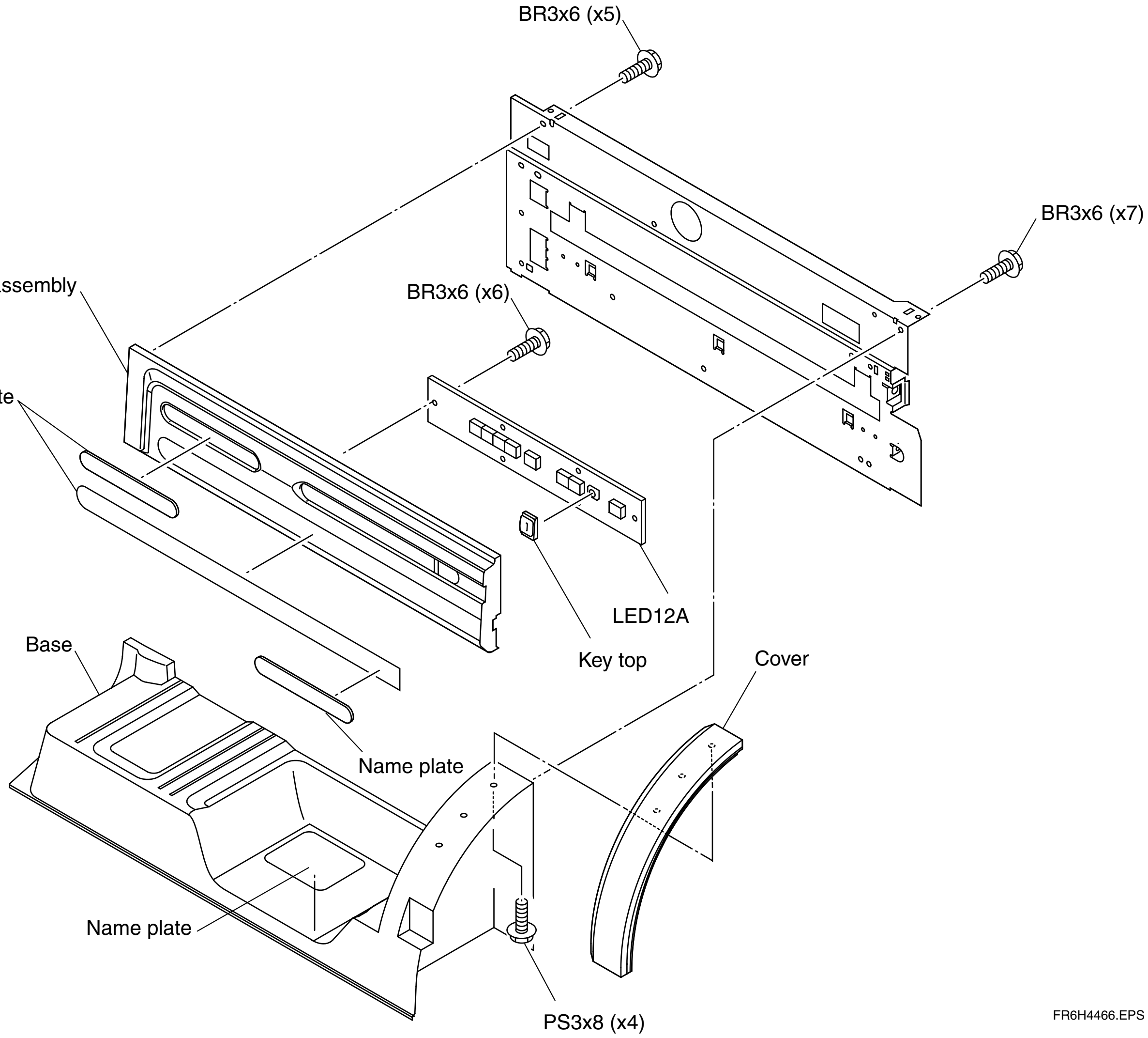
☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the shelf cover assembly.


FRONT
#1
[Disconnect]
Connector
CNLED2
#2
[Remove] DT3x6 (x4)
FRONT
#1
[Disconnect] Connector CNSA1
Shelf cover assembly

FR6H4423.EPS

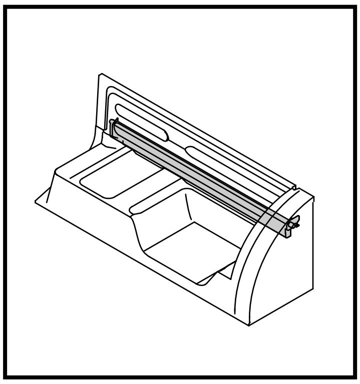
■ Exploded View


BR3x6 (x5)
BR3x6 (x7)
Panel assembly
BR3x6 (x6)
Name plate
LED12A
Key top
Base
Cover
Name plate
Name plate
PS3x8 (x4)
FR6H4466.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.2 Shutter



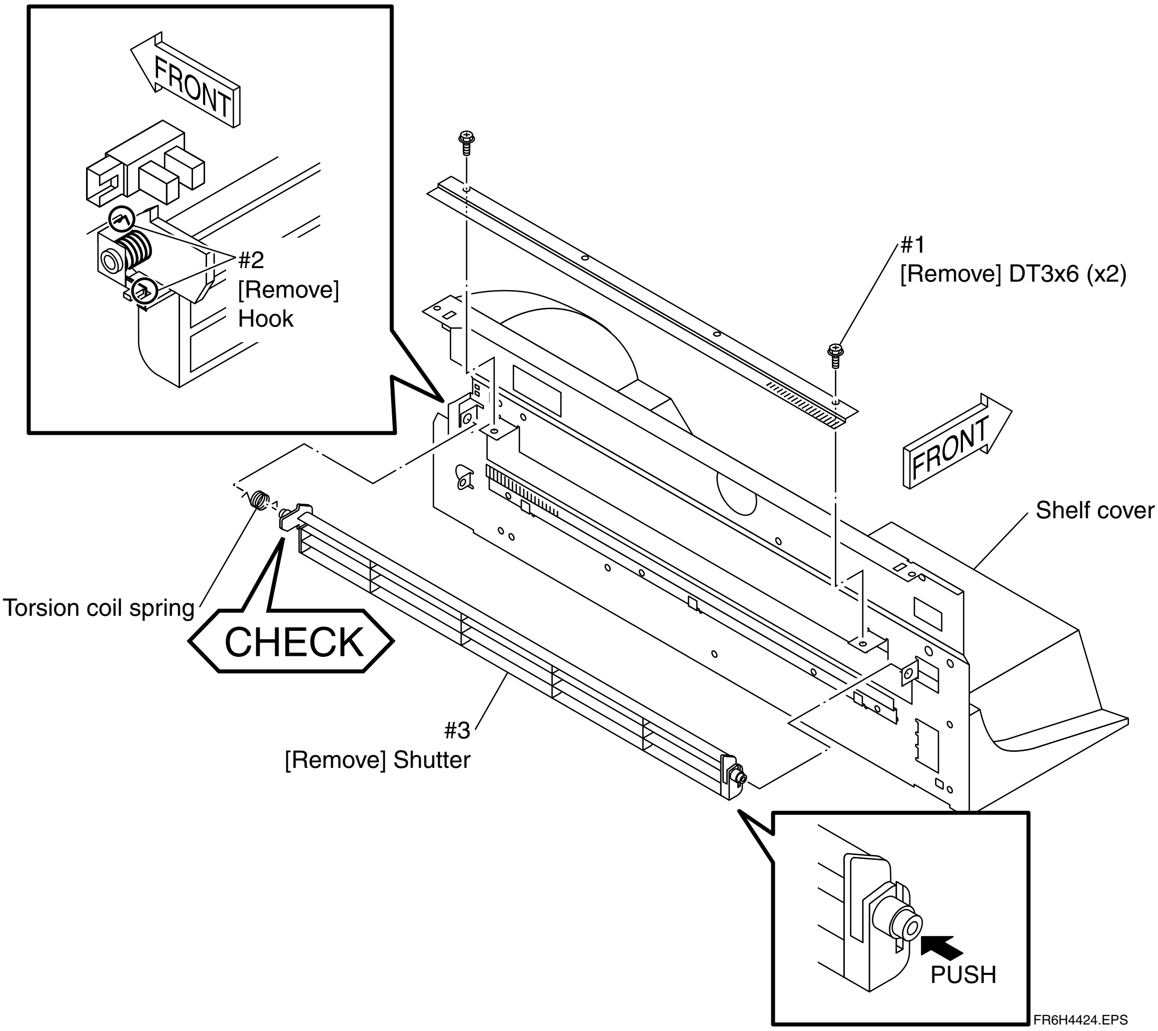
FR6H4469.EPS

■ Removal Procedures

(1) Remove the shelf cover assembly.

☞ "5.1 Shelf Cover Assembly"

(2) Remove the shutter.



FRONT
#2
[Remove]
Hook
#1
[Remove] DT3x6 (x2)
FRONT
Shelf cover
Torsion coil spring
CHECK
#3
[Remove] Shutter
PUSH

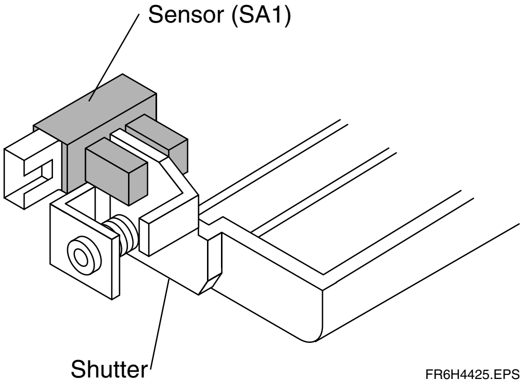
FR6H4424.EPS

■ Reinstallation Procedures

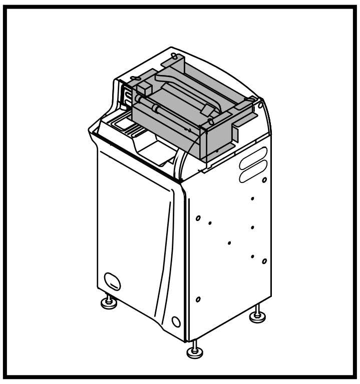
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the sensor (SA1) and shutter do not interfere with each other.


Sensor (SA1)
Shutter
FR6H4425.EPS

5.3 Cassette Set Unit



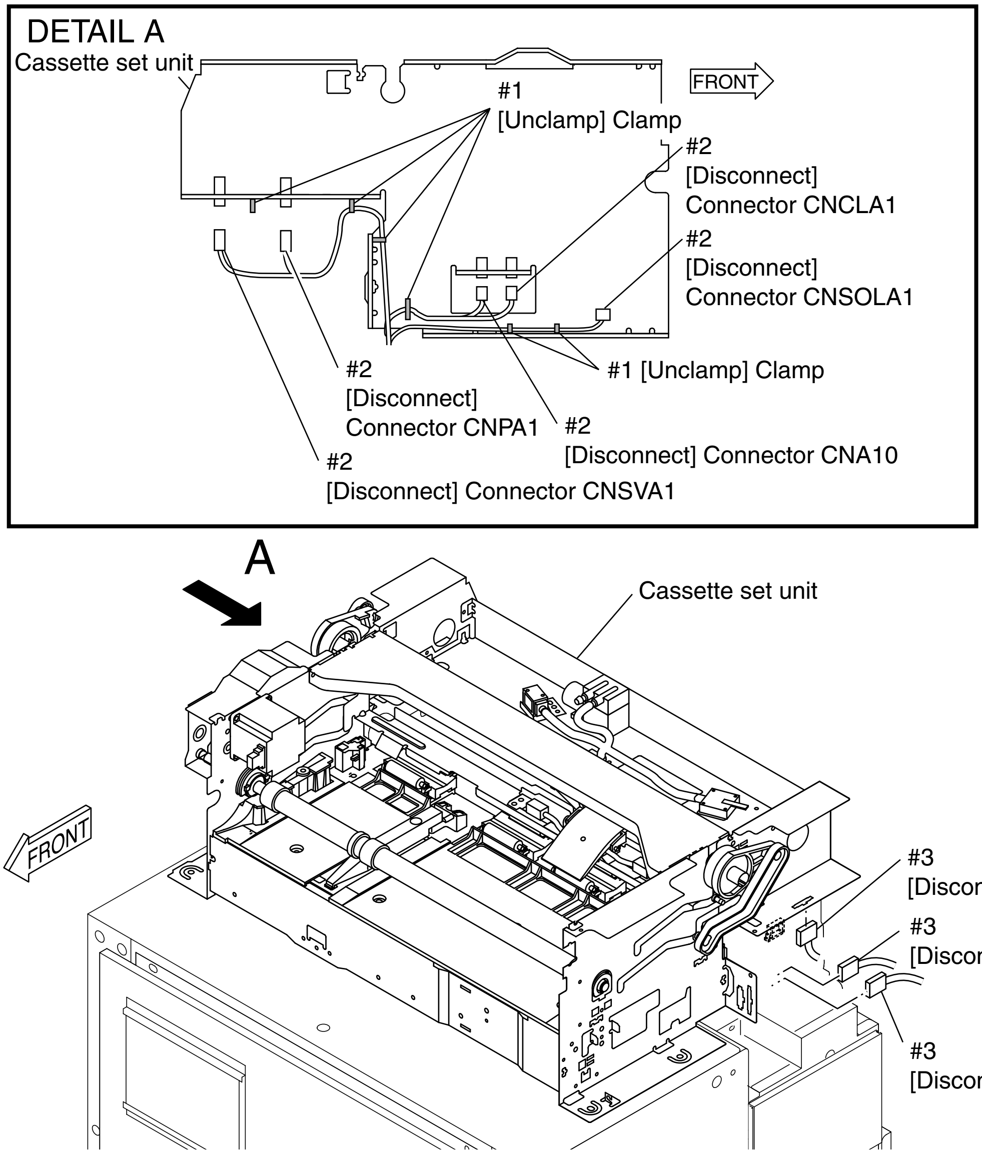
FR6H4443.EPS

■ Removal Procedures

(1) Remove the shelf cover assembly.

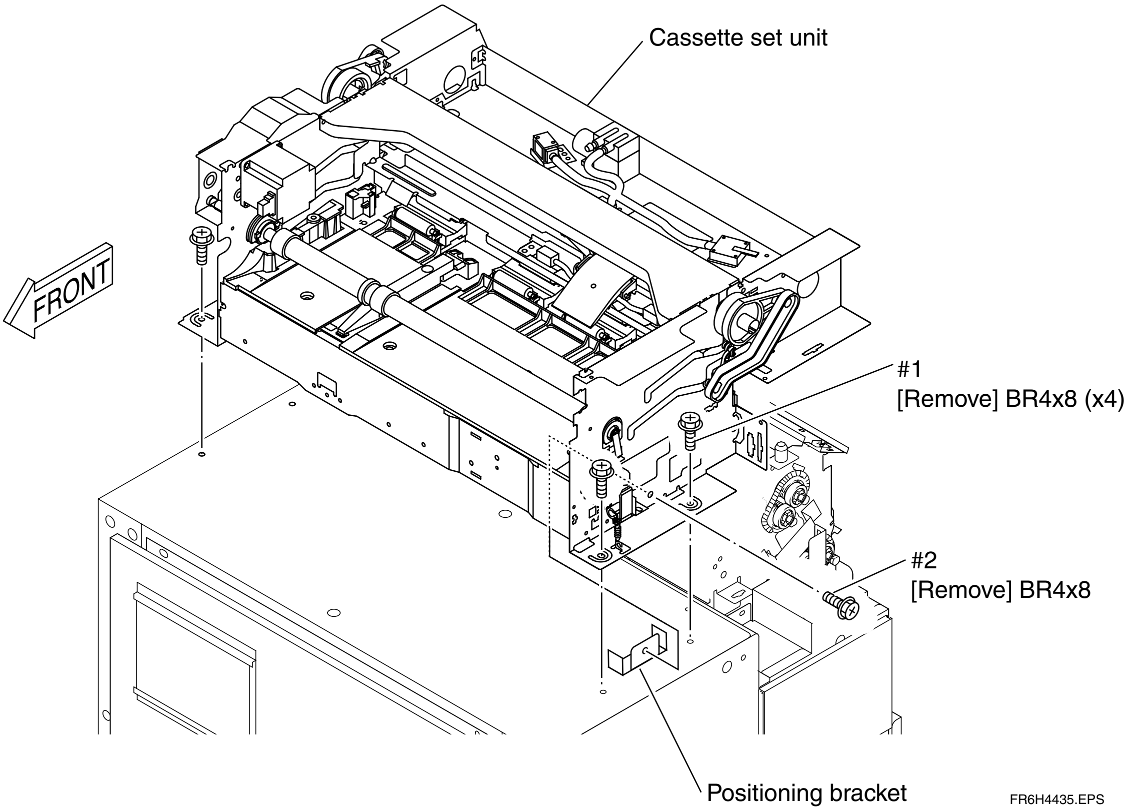
☞ “5.1 Shelf Cover Assembly”

(2) Disconnect the connectors.


DETAIL A
Cassette set unit
FRONT
#1
[Unclamp] Clamp
#2
[Disconnect]
Connector CNCLA1
#2
[Disconnect]
Connector CNSOLA1
#1 [Unclamp] Clamp
#2
[Disconnect]
Connector CNPA1
#2
[Disconnect] Connector CNA10
#2
[Disconnect] Connector CNSVA1
A
Cassette set unit
FRONT
#3
[Disconnect] Connector CNA2
#3
[Disconnect] Connector CNA4
#3
[Disconnect] Connector CNA1

FR6H4429.EPS

(3) Remove the cassette set unit.


Cassette set unit
FRONT
#1
[Remove] BR4x8 (x4)
#2
[Remove] BR4x8
Positioning bracket
FR6H4435.EPS

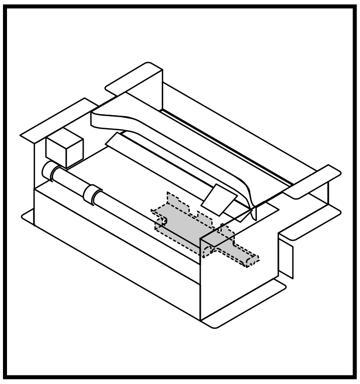
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the cassette set unit, align the cassette set unit against the positioning bracket to position it as appropriate, and then tighten the screws in reverse order of removal.

For reinstallation, reverse the removal steps.

5.4 Wrong-Insertion Prevention Bracket Assembly


FR6H4464.EPS

■ Removal Procedures

(1) Remove the cassette set unit.

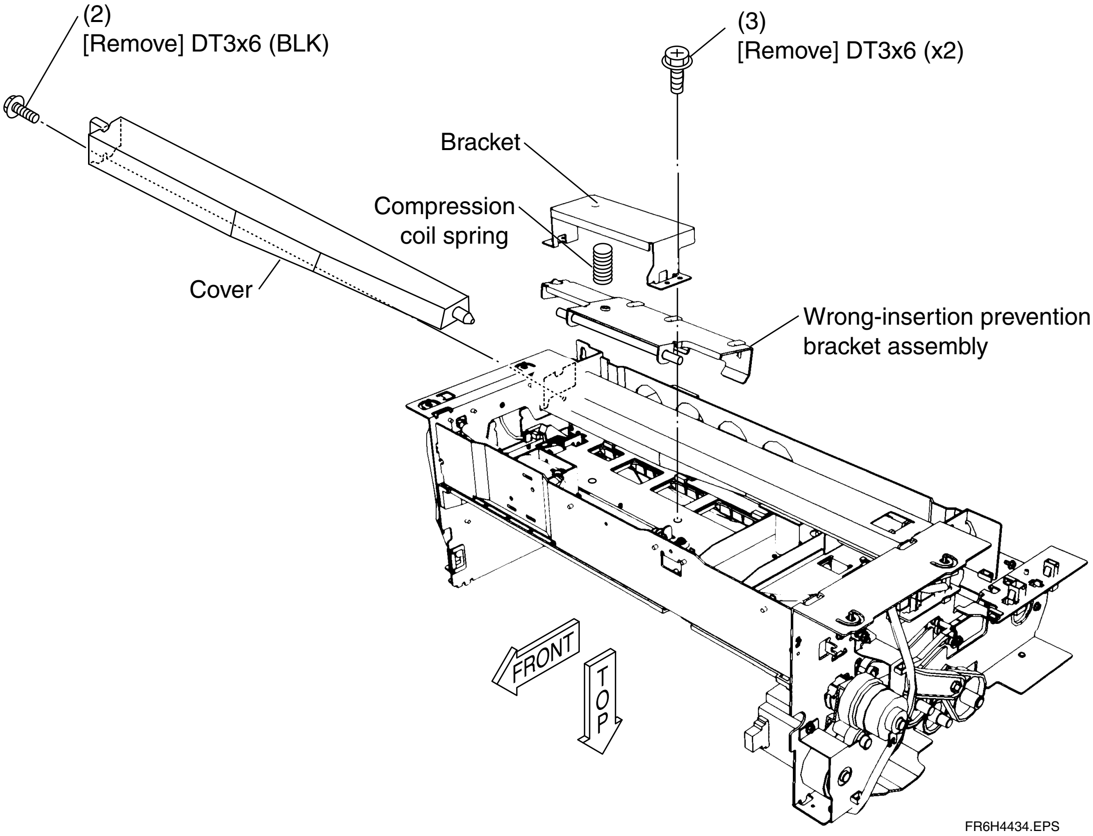
☞ “5.3 Cassette Set Unit”

◆ *INSTRUCTION* ◆

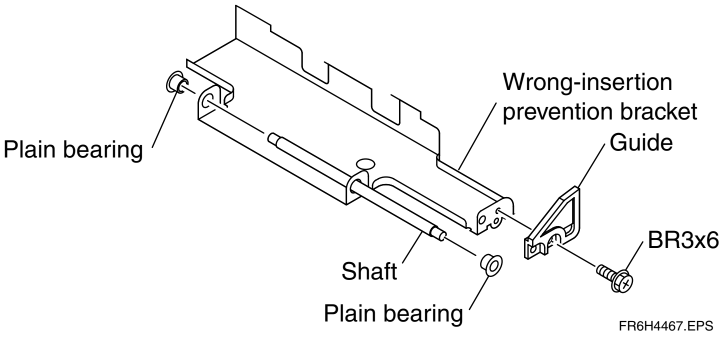
To remove the wrong-insertion prevention bracket assembly, access it from behind the cassette set unit.

(2) Remove the cover.

(3) Remove the wrong-insertion prevention bracket assembly.


(2)
[Remove] DT3x6 (BLK)
(3)
[Remove] DT3x6 (x2)
Bracket
Compression coil spring
Cover
Wrong-insertion prevention bracket assembly
FRONT
TOP
FR6H4434.EPS

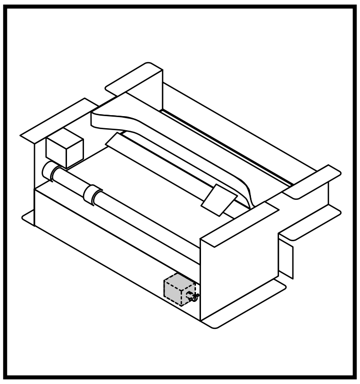
■ Exploded View


Wrong-insertion prevention bracket
Guide
Plain bearing
BR3x6
Shaft
Plain bearing
FR6H4467.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.5 Solenoid (SolA1)



FR6H4462.EPS

■ Removal Procedures

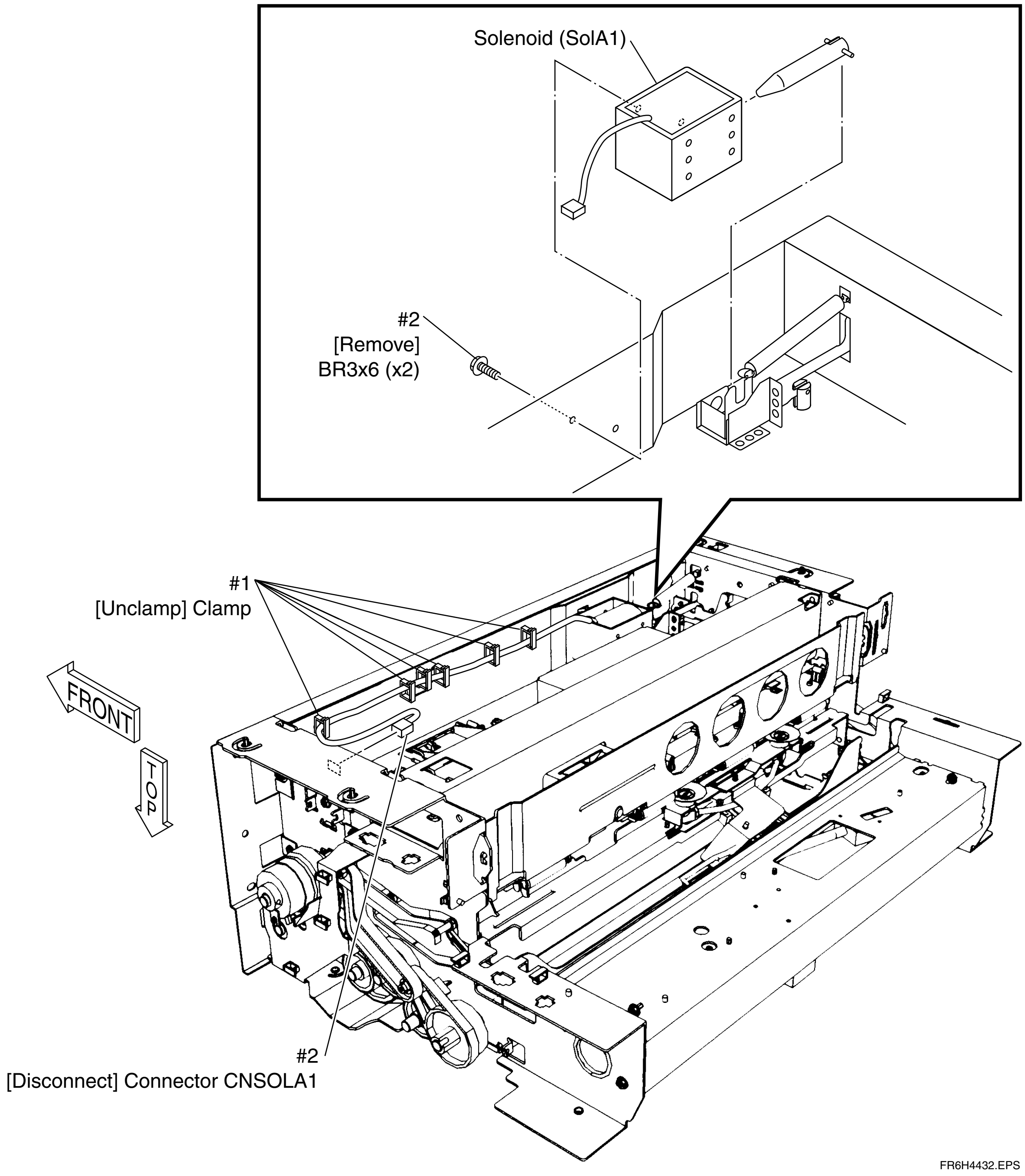
(1) Remove the cassette set unit.

☞ “5.3 Cassette Set Unit”

◆ ***NOTE*** ◆

To remove the solenoid (SolA1), access it from behind the cassette set unit.

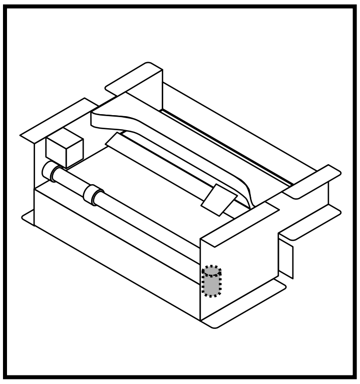
(2) Remove the solenoid (SolA1).


Solenoid (SolA1)
#2
[Remove]
BR3x6 (x2)
#1
[Unclamp] Clamp
FRONT
TOP
#2
[Disconnect] Connector CNSOLA1
FR6H4432.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.6 Hold Pin



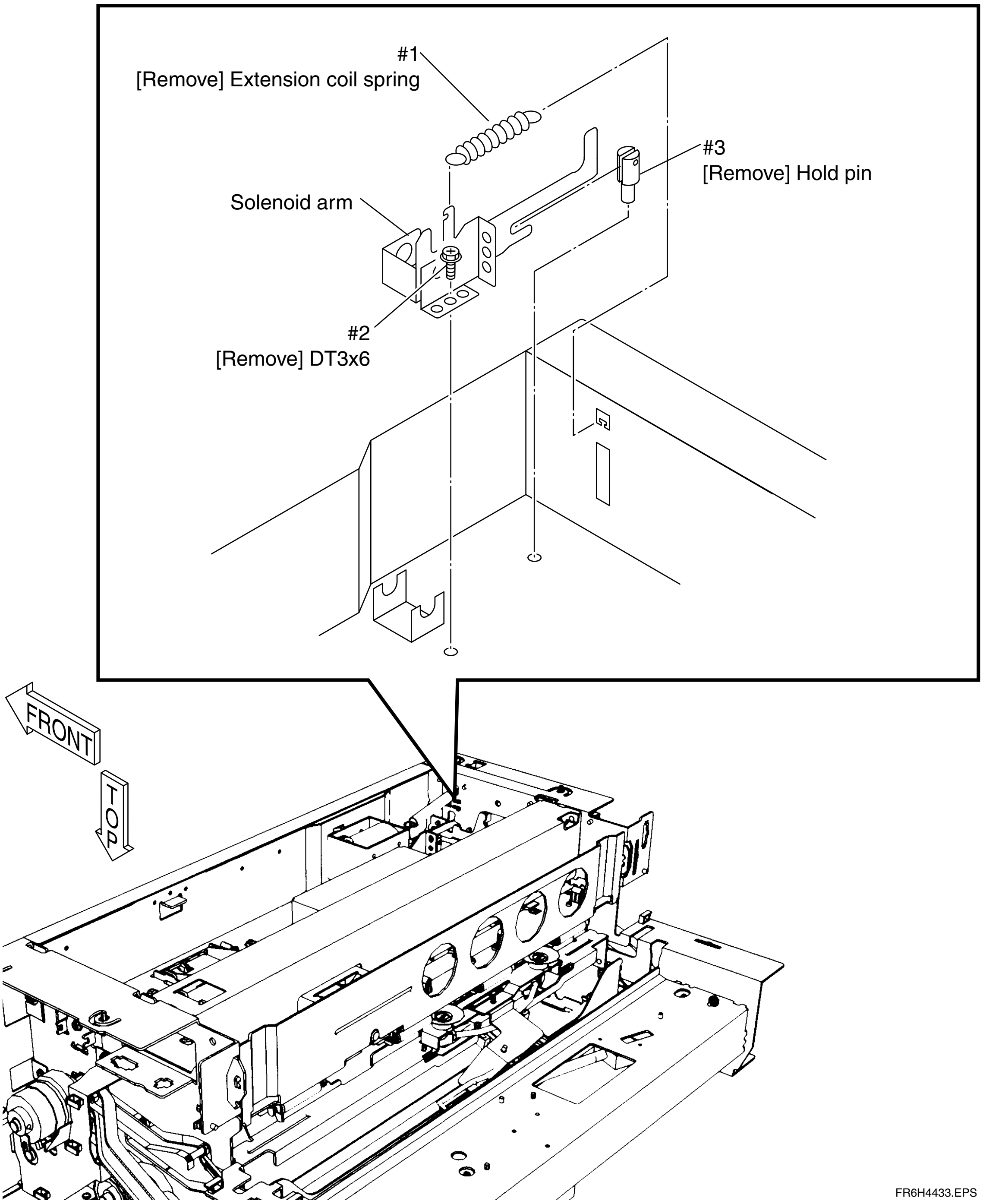
FR6H4463.EPS

■ Removal Procedures

(1) Remove the solenoid (SolA1).

☞ “5.5 Solenoid (SolA1)”

(2) Remove the hold pin.

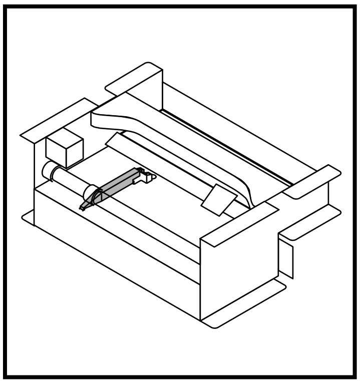

#1
[Remove] Extension coil spring
#3
[Remove] Hold pin
Solenoid arm
#2
[Remove] DT3x6
FRONT
TOP

FR6H4433.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.7 Inch/Metric Changeover Guide



FR6H4455.EPS

■ Removal Procedures

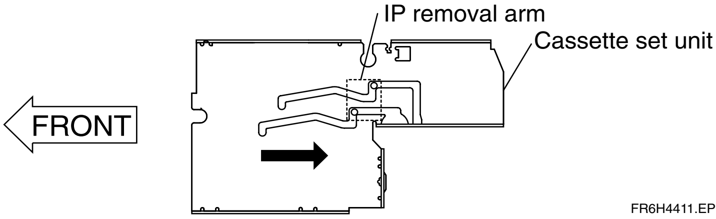
(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ "3.1 Removing and Reinstalling the Covers"

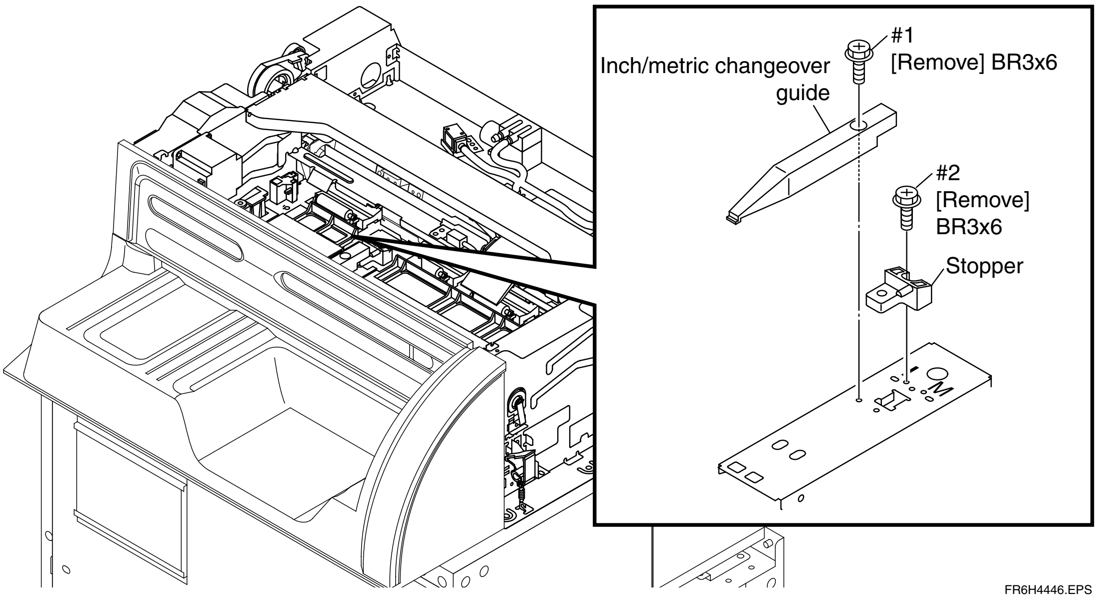
◆ ***NOTE*** ◆

Move the IP removal arm to its home position before performing the procedures.


IP removal arm
Cassette set unit
FRONT

FR6H4411.EPS

(2) Remove the inch/metric changeover guide.

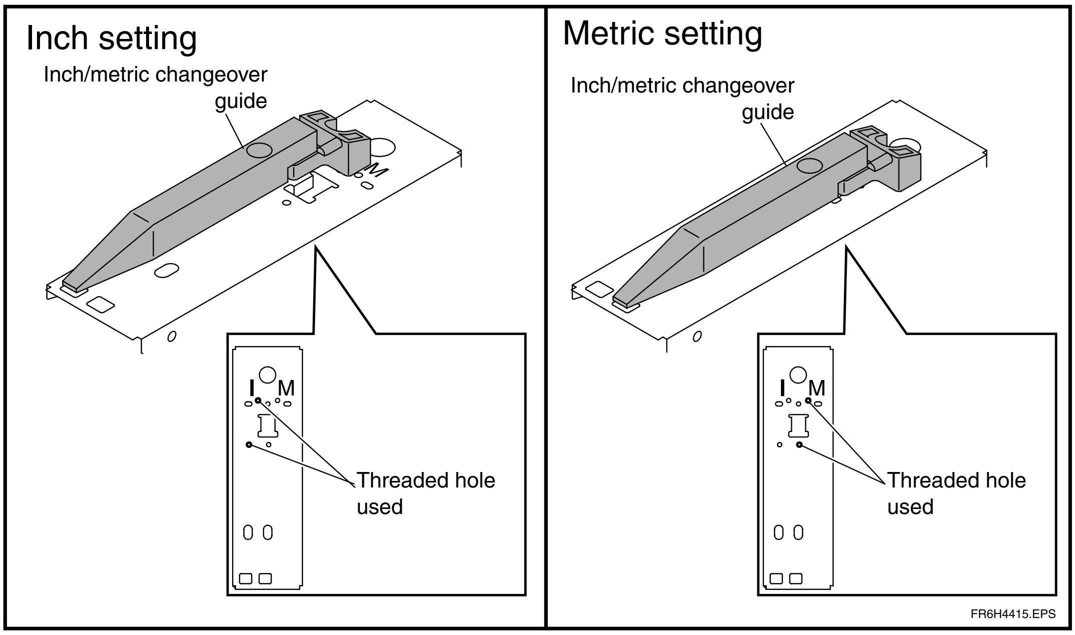

Inch/metric changeover guide
#1
[Remove] BR3x6
#2
[Remove]
BR3x6
Stopper
I
M

FR6H4446.EPS

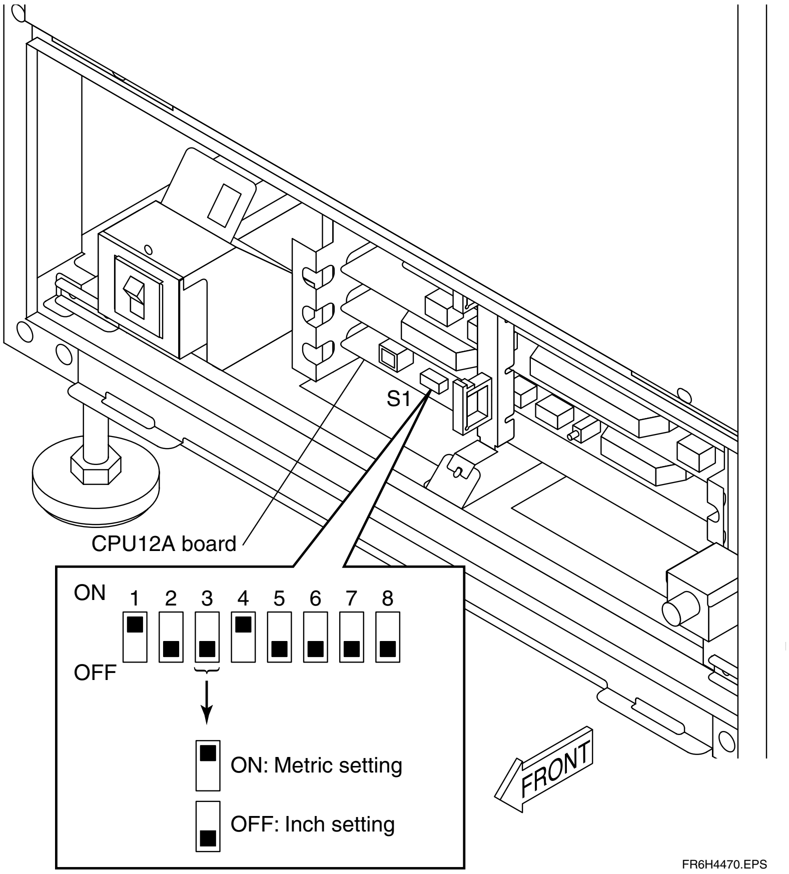
■ Reinstallation Procedures

◆ *INSTRUCTIONS* ◆

- *The changeover guide mounting location differs depending on whether the inch or metric setting is used. Install the inch/metric changeover guide as instructed in the illustration below according to the setting selected.*

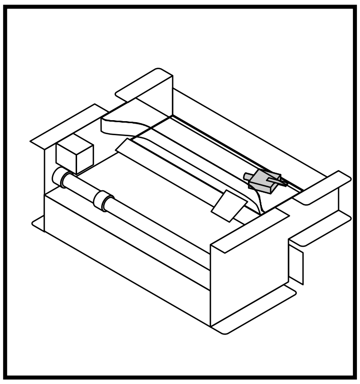

Inch setting
Inch/metric changeover guide
I
M
Threaded hole used
Metric setting
Inch/metric changeover guide
I
M
Threaded hole used
FR6H4415.EPS

- *Set the DIP switches on the CPU12A board as appropriate.*


S1
CPU12A board
ON
OFF
1
2
3
4
5
6
7
8
ON: Metric setting
OFF: Inch setting
FRONT
FR6H4470.EPS

For reinstallation, reverse the removal steps.

5.8 Suction Sensor (SA5)



FR6H4465.EPS

■ Removal Procedures

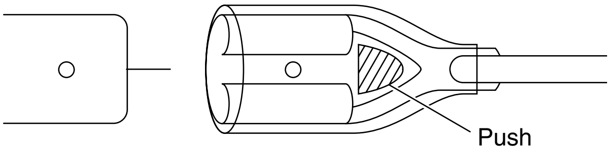
(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ “3.1 Removing and Reinstalling the Covers”

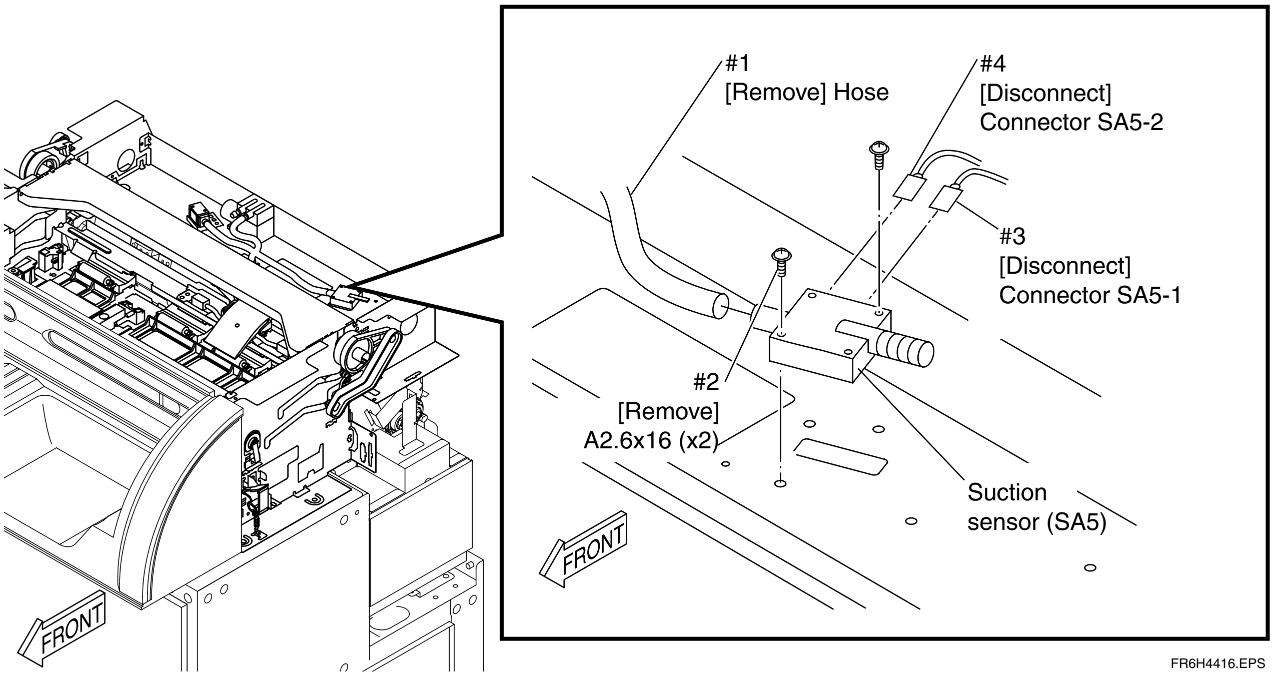
◆ *NOTE* ◆

To remove the FASTON terminal, push the shaded portion of the terminal illustrated below to detach it.



FR6H0001.EPS

(2) Remove the suction sensor (SA5).


#1
[Remove] Hose
#4
[Disconnect]
Connector SA5-2
#3
[Disconnect]
Connector SA5-1
#2
[Remove]
A2.6x16 (x2)
Suction
sensor (SA5)
FRONT
FRONT

FR6H4416.EPS

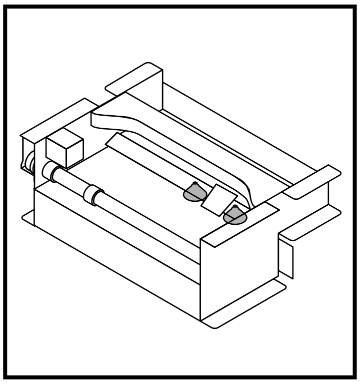
■ Reinstallation Procedures

◆ *NOTE* ◆

To attach the FASTON terminal, insert it all the way to secure it in place.

For reinstallation, reverse the removal steps.

5.9 Suction Cup



FR6H4453.EPS

■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

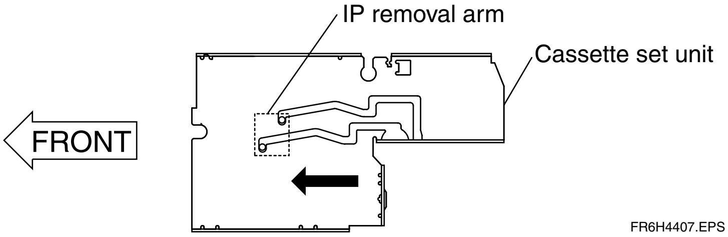
☞ "3.1 Removing and Reinstalling the Covers"

◆ *INSTRUCTION* ◆

When installing or removing the suction cup assembly, perform the procedures while supporting the IP removal arm by hand.
If you try to perform the procedures without supporting the IP removal arm, the IP removal arm may be bent.

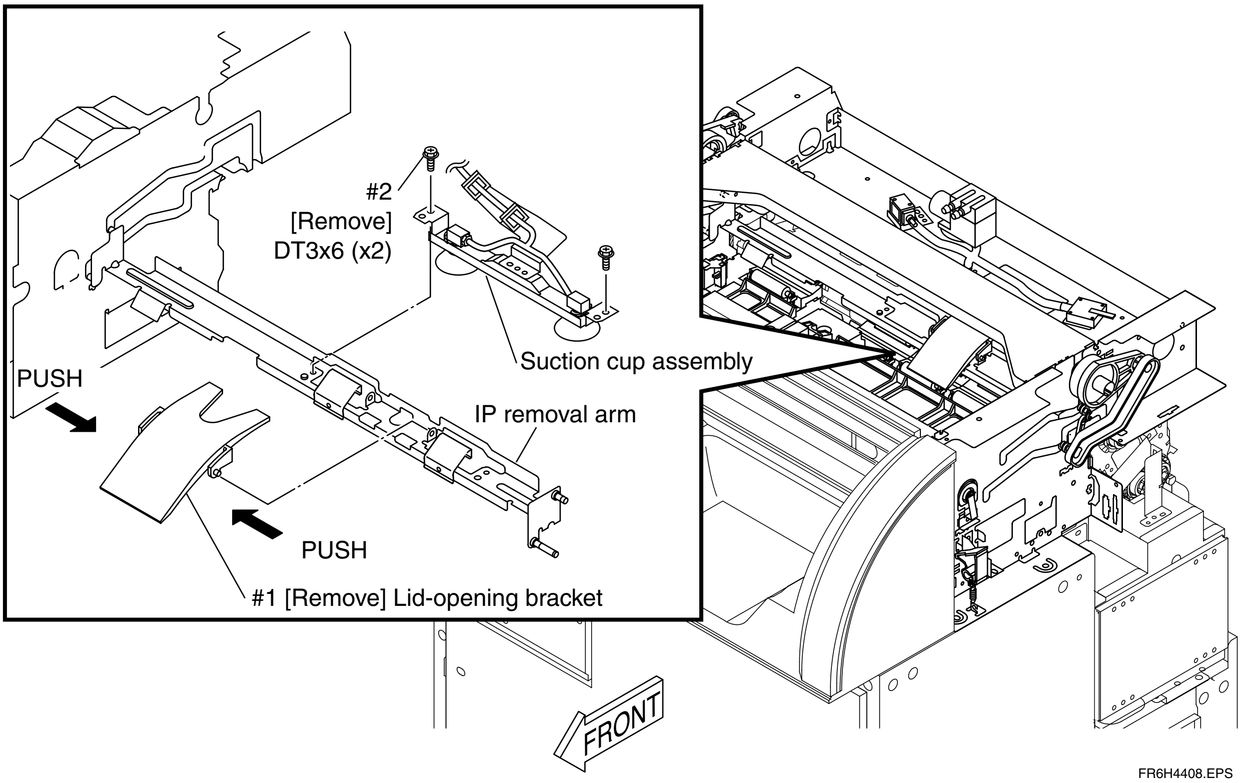
◆ *NOTE* ◆

Move the IP removal arm to its IP suction position before performing the procedures.

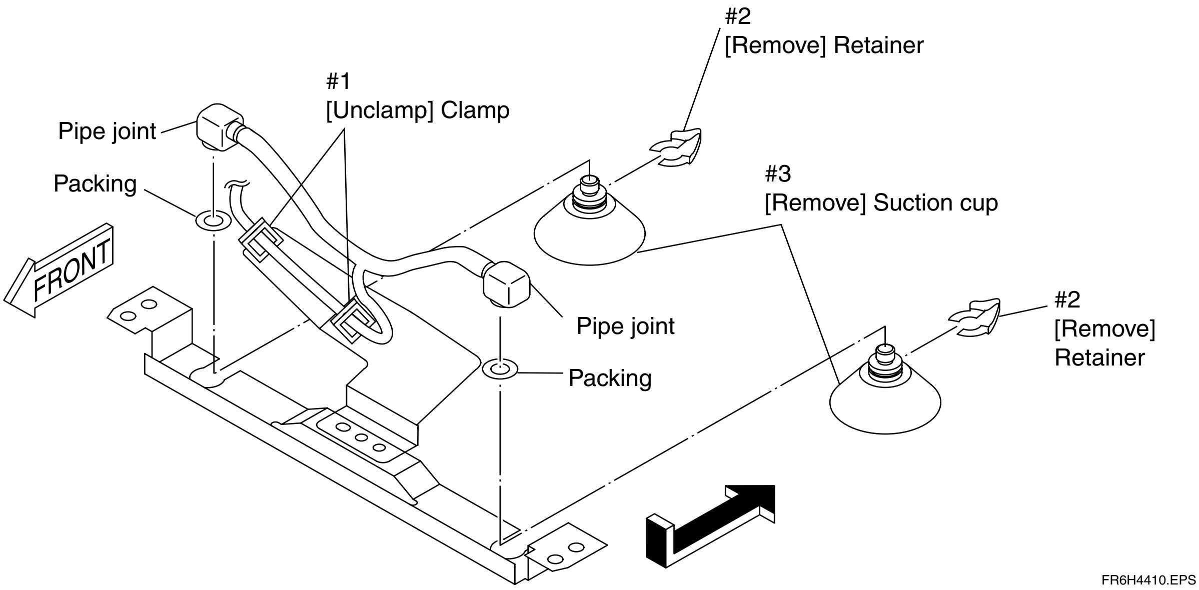


FR6H4407.EPS

(2) Remove the suction cup assembly.

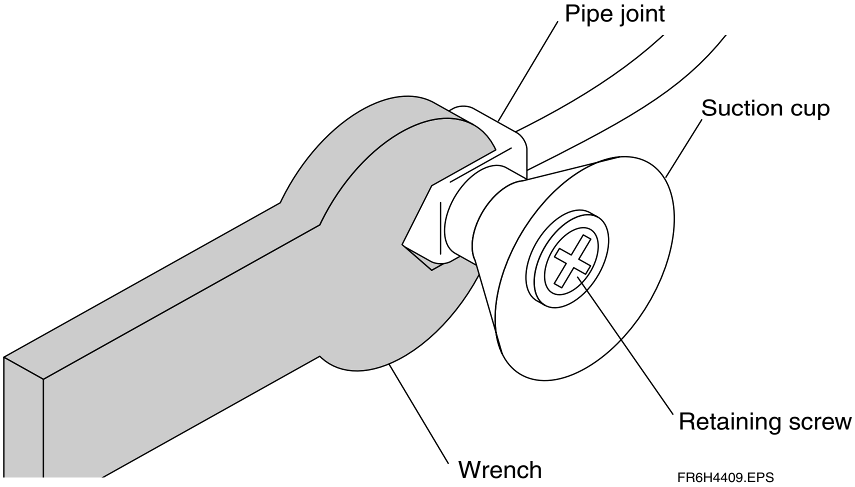

#2
[Remove]
DT3x6 (x2)
Suction cup assembly
PUSH
IP removal arm
PUSH
#1 [Remove] Lid-opening bracket
FRONT
FR6H4408.EPS

(3) Remove the suction cup.


#2
[Remove] Retainer
#1
[Unclamp] Clamp
Pipe joint
Packing
FRONT
#3
[Remove] Suction cup
Pipe joint
Packing
#2
[Remove]
Retainer
FR6H4410.EPS

◆ NOTE ◆

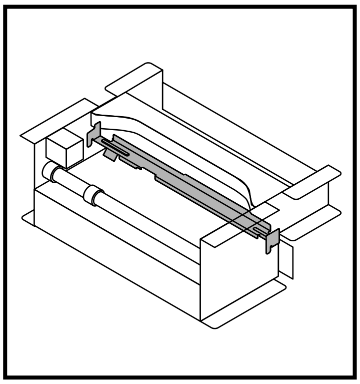
While keeping the pipe joint in place by use of a wrench or the like, remove the suction cup with a Phillips screwdriver.


Pipe joint
Suction cup
Retaining screw
Wrench
FR6H4409.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.10 IP Removal Arm



FR6H4454.EPS

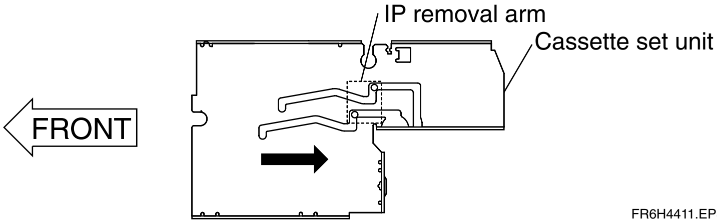
■ Removal Procedures

(1) Remove the suction cup assembly.

☞ "5.9 Suction Cup"

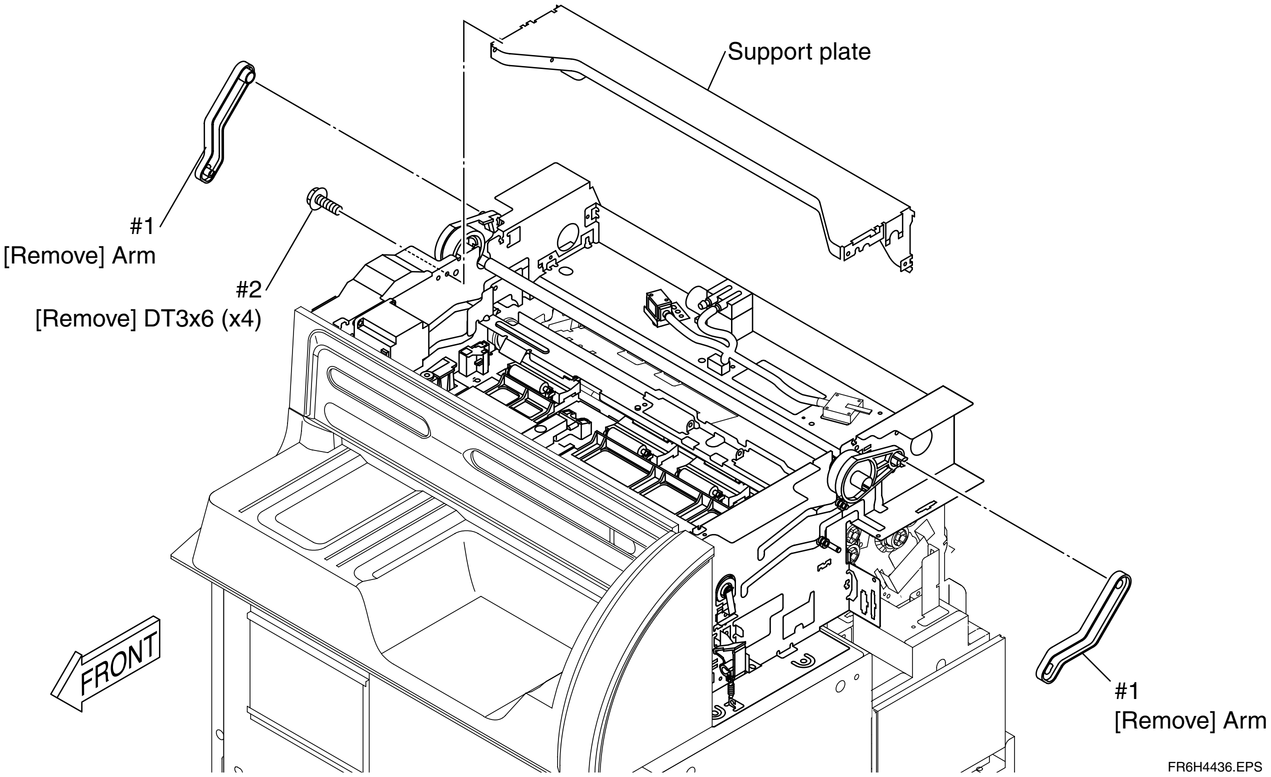
◆ *NOTE* ◆

Move the IP removal arm to its home position before performing the procedures.

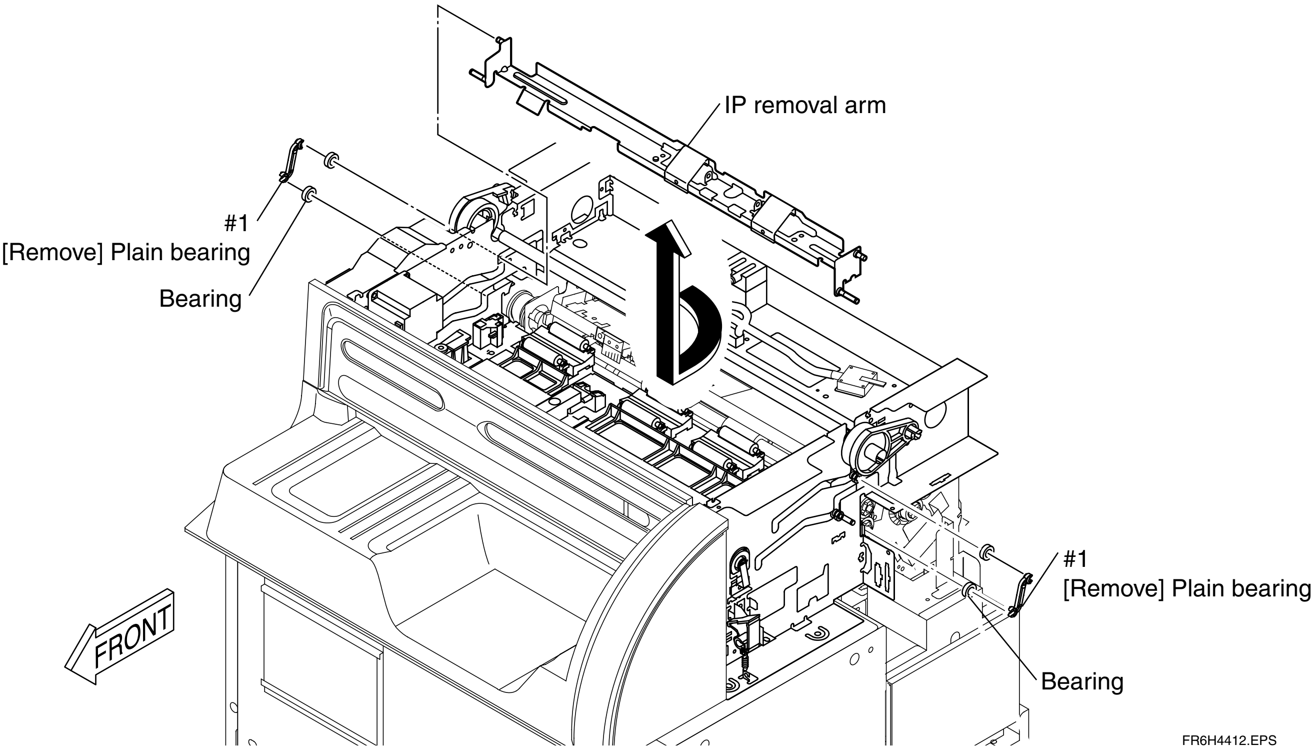

IP removal arm
Cassette set unit
FRONT

FR6H4411.EPS

(2) Remove the support plate.


Support plate
#1
[Remove] Arm
#2
[Remove] DT3x6 (x4)
FRONT
#1
[Remove] Arm
FR6H4436.EPS

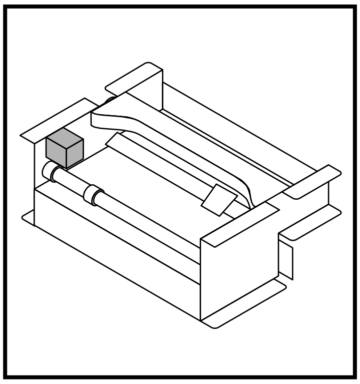
(3) Remove the IP removal arm.


IP removal arm
#1
[Remove] Plain bearing
Bearing
FRONT
#1
[Remove] Plain bearing
Bearing
FR6H4412.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.11 Motor (MA1)



FR6H4451.EPS

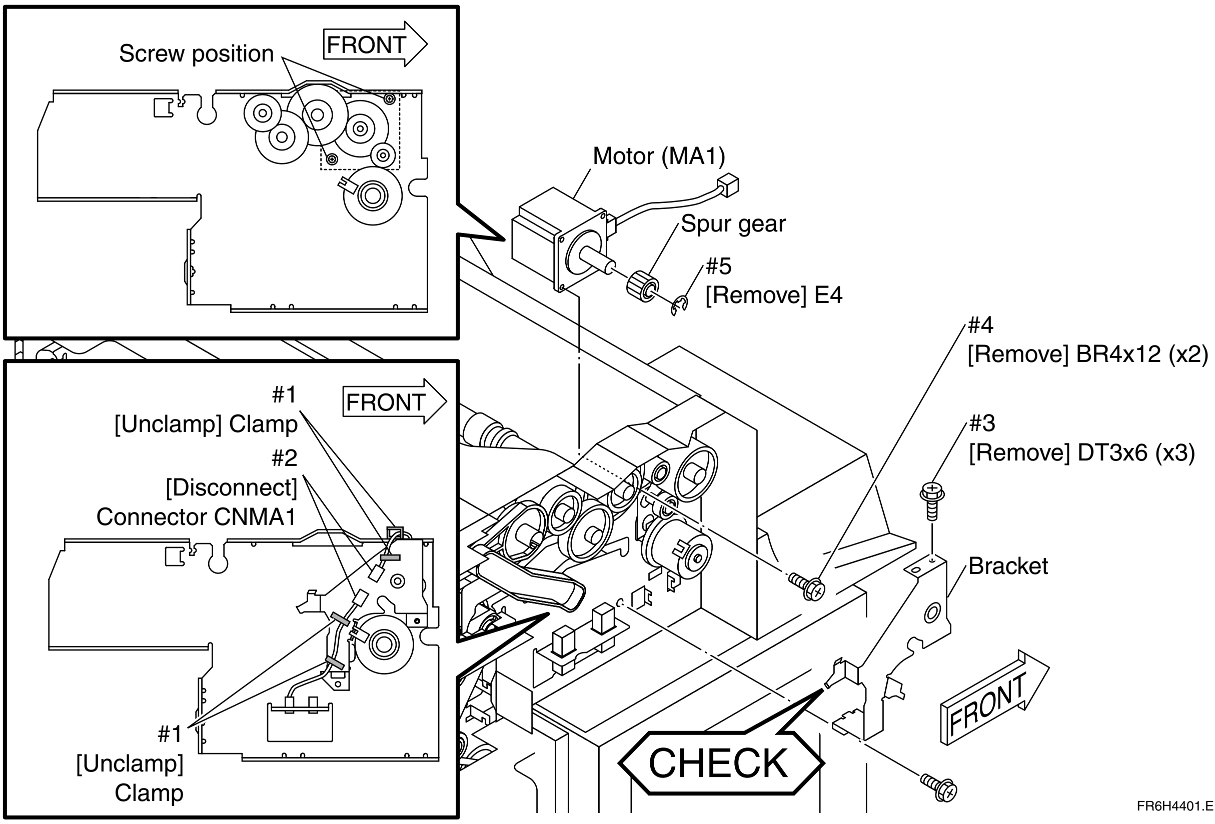
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the motor (MA1).

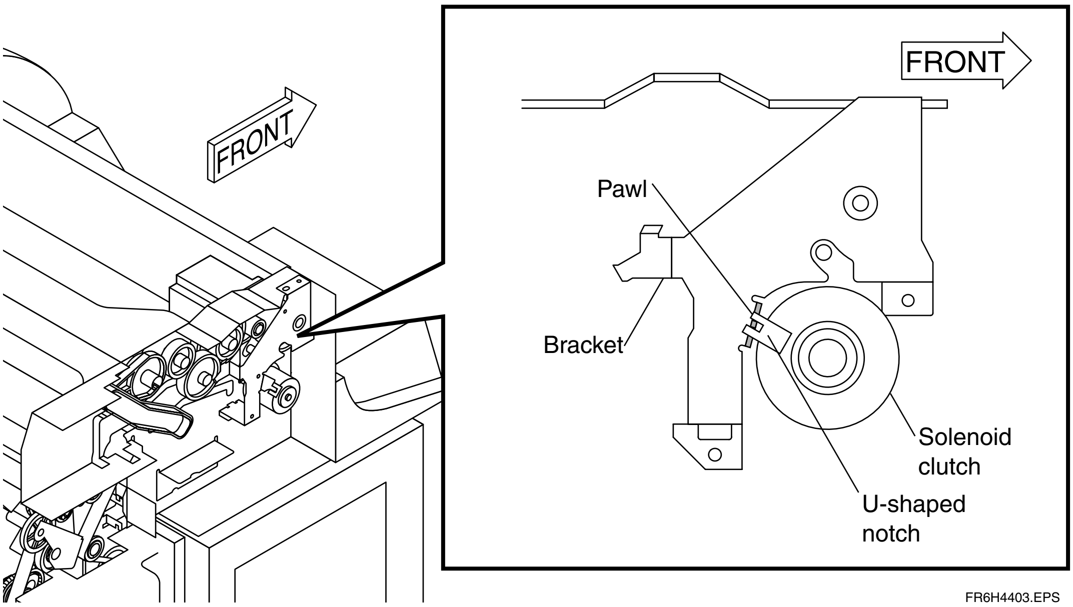

Screw position
FRONT
Motor (MA1)
Spur gear
#5
[Remove] E4
#4
[Remove] BR4x12 (x2)
#3
[Remove] DT3x6 (x3)
Bracket
#1
[Unclamp] Clamp
FRONT
#2
[Disconnect]
Connector CNMA1
#1
[Unclamp]
Clamp
CHECK
FRONT

FR6H4401.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When attaching the bracket, make sure that the pawl of the bracket is engaged into the U-shaped notch of the solenoid clutch.

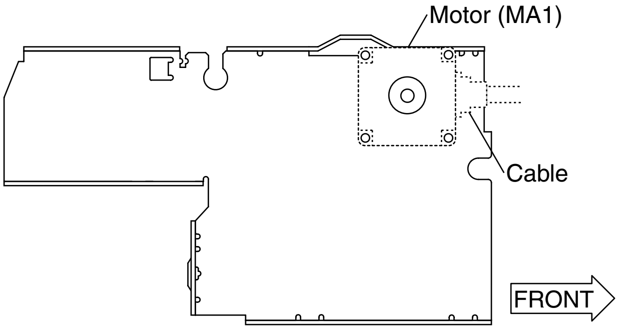

FRONT
FRONT
Pawl
Bracket
Solenoid clutch
U-shaped notch

FR6H4403.EPS

For reinstallation, reverse the removal steps.

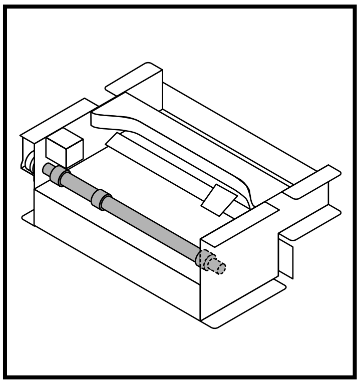
■ Check/Adjustment Procedures

- Make sure that the pawl of the bracket is engaged into the U-shaped notch of the solenoid clutch.
- Make sure that the motor (MA1) is installed in its correct orientation.


Motor (MA1)
Cable
FRONT

FR6H4438.EPS

5.12 Roller



FR6H4452.EPS

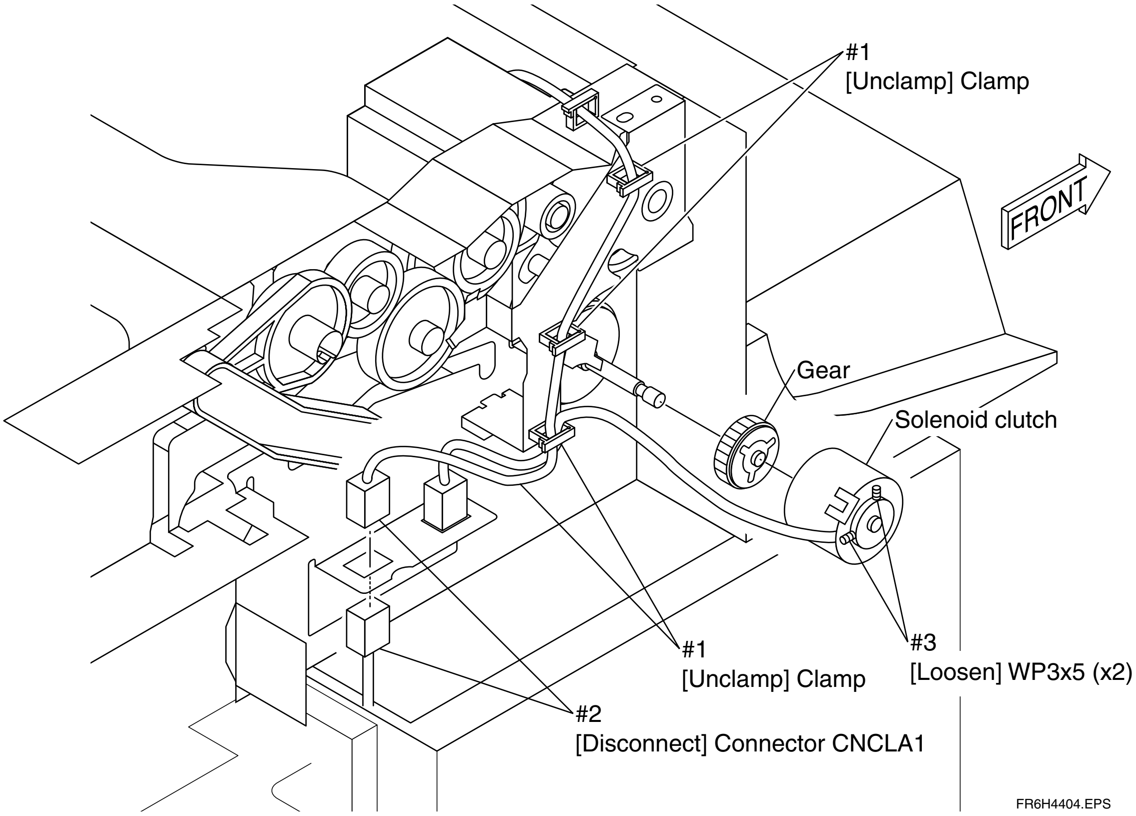
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ "3.1 Removing and Reinstalling the Covers"

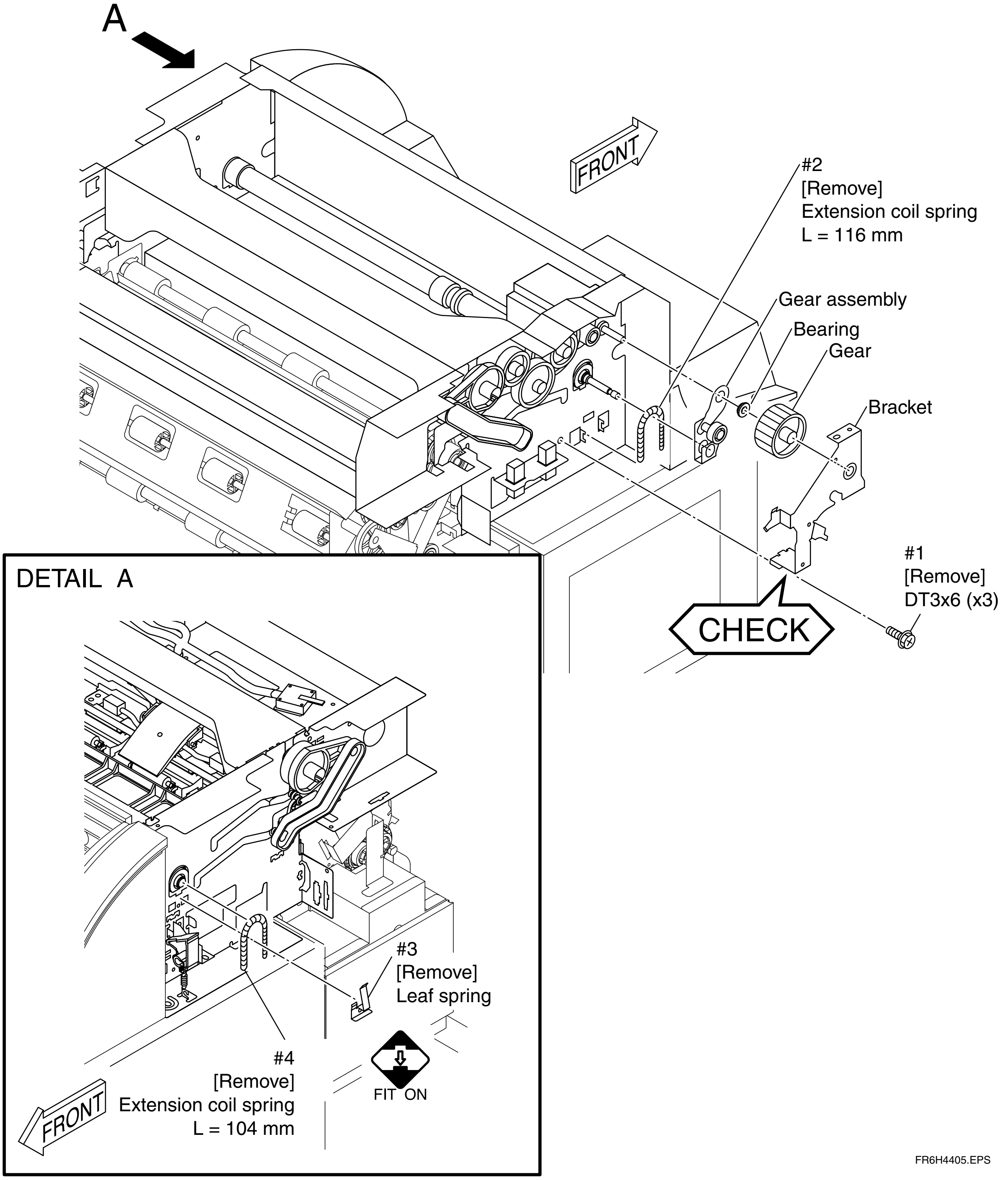
(2) Remove the solenoid clutch.



#1
[Unclamp] Clamp
FRONT
Gear
Solenoid clutch
#1
[Unclamp] Clamp
#3
[Loosen] WP3x5 (x2)
#2
[Disconnect] Connector CNCLA1

FR6H4404.EPS

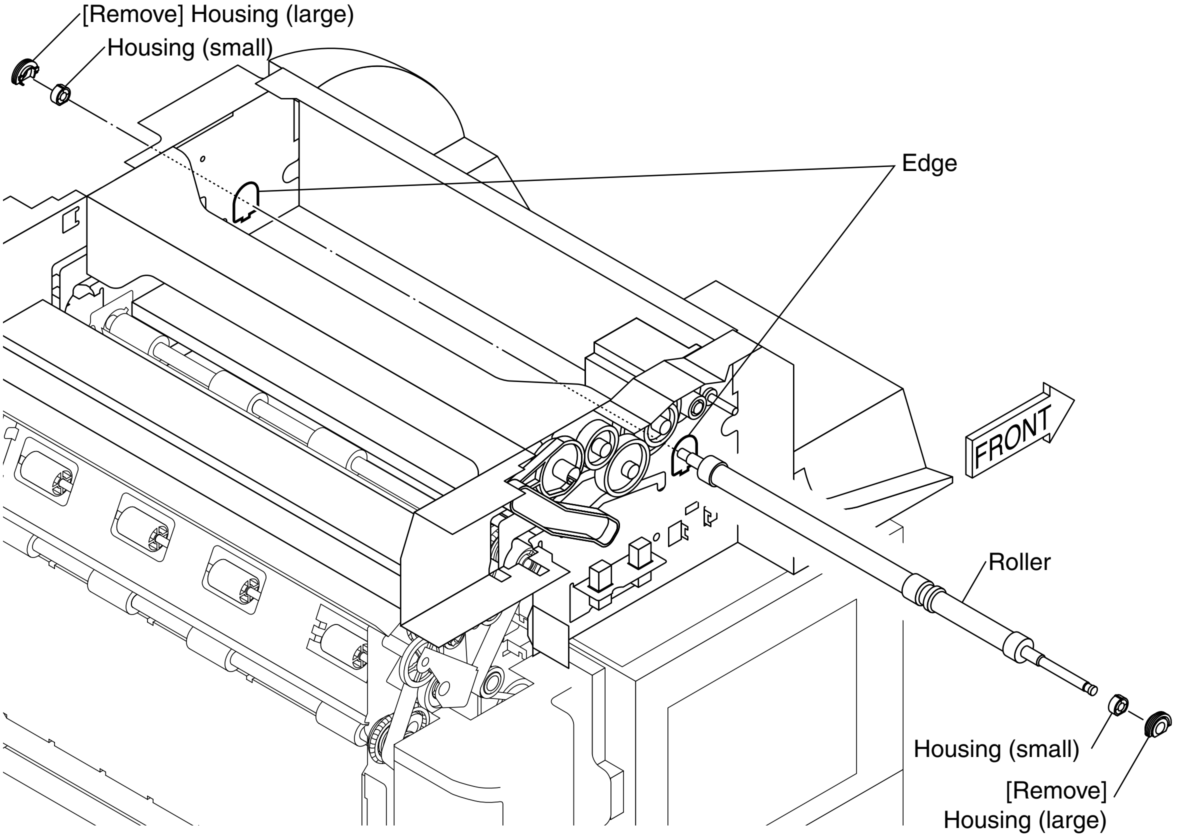
(3) Remove the bracket.


A
FRONT
#2
[Remove]
Extension coil spring
L = 116 mm
Gear assembly
Bearing
Gear
Bracket
#1
[Remove]
DT3x6 (x3)
CHECK
DETAIL A
#3
[Remove]
Leaf spring
#4
[Remove]
Extension coil spring
L = 104 mm
FIT ON
FRONT
FR6H4405.EPS

◆ *INSTRUCTION* ◆

When removing the roller, make sure that the edges of the side plates do not interfere with the roller.

(4) Remove the roller.


[Remove] Housing (large)
Housing (small)
Edge
FRONT
Roller
Housing (small)
[Remove]
Housing (large)

FR6H4406.EPS

■ Reinstallation Procedures

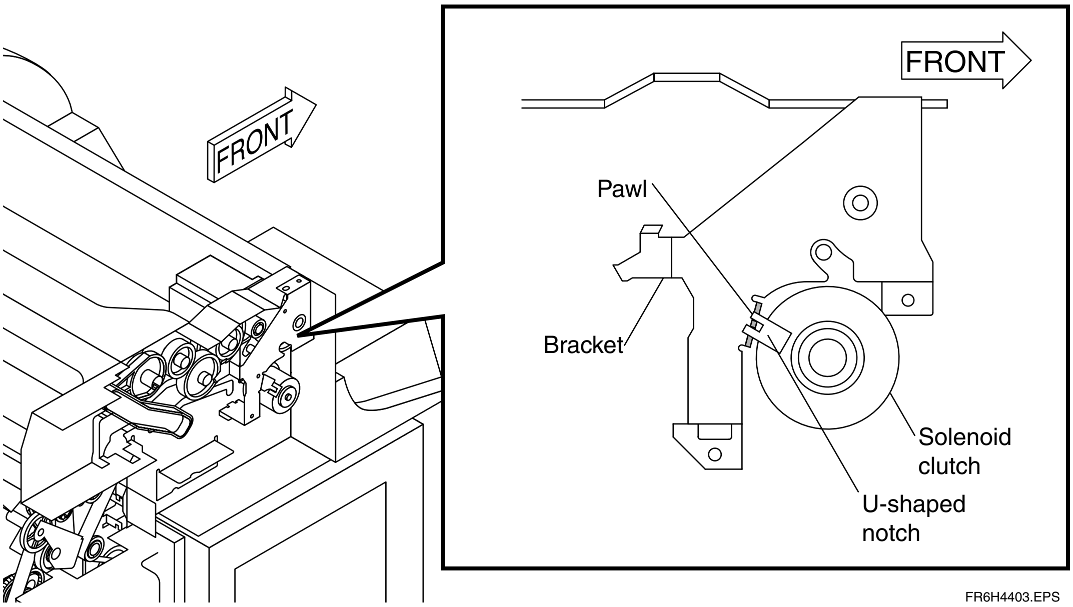
◆ *INSTRUCTION* ◆

The extension coil springs differ in size depending on where they are attached. Use care not to confuse their locations..

For reinstallation, reverse the removal steps.

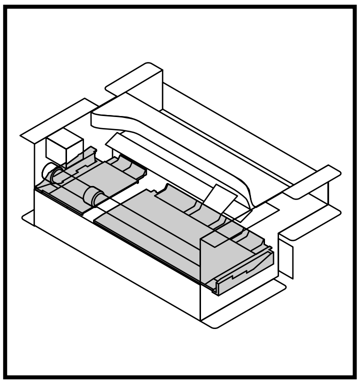
■ Check/Adjustment Procedures

- Make sure that the pawl of the bracket is engaged into the U-shaped notch of the solenoid clutch.


FRONT
FRONT
Pawl
Bracket
Solenoid clutch
U-shaped notch

FR6H4403.EPS

5.13 Guide Plate



FR6H4459.EPS

■ Removal Procedures

◇ *REFERENCE* ◇

When only the guide plate (large) is to be removed, the motor (MA1) need not be removed.

(1) Remove the shelf cover assembly.

☞ “5.1 Shelf Cover Assembly”

(2) Remove the motor (MA1).

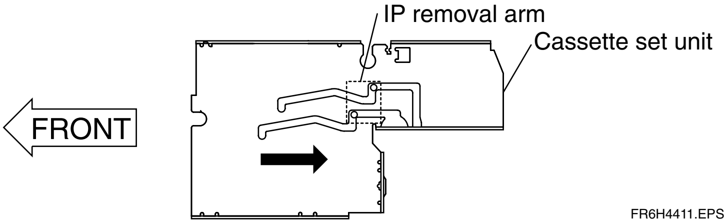
☞ “5.11 Motor (MA1)”

(3) Remove the roller.

☞ “5.12 Roller”

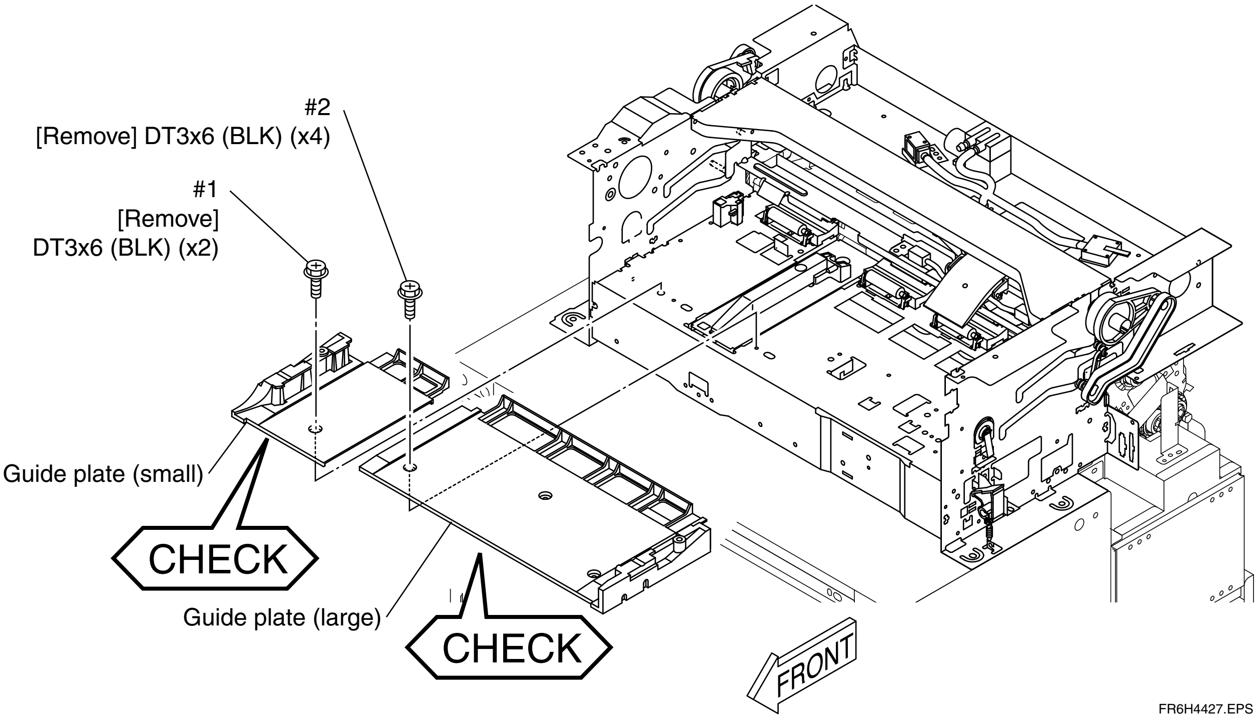
◆ *NOTE* ◆

Move the IP removal arm to its home position before performing the procedures.



FR6H4411.EPS

(4) Remove the guide plate (large) and guide plate (small).

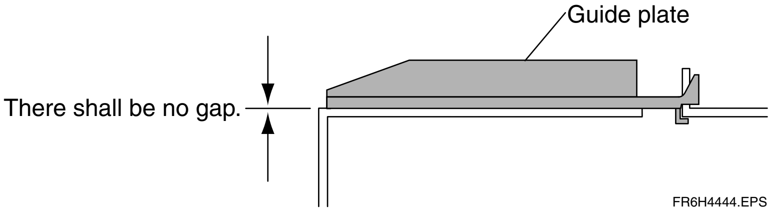

#2
[Remove] DT3x6 (BLK) (x4)
#1
[Remove]
DT3x6 (BLK) (x2)
Guide plate (small)
CHECK
Guide plate (large)
CHECK
FRONT
FR6H4427.EPS

■ Reinstallation Procedures

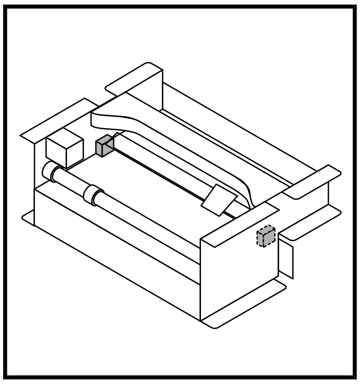
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the guide plate is not lifted.


Guide plate
There shall be no gap.
FR6H4444.EPS

5.14 Stopper



FR6H4456.EPS

■ Removal Procedures

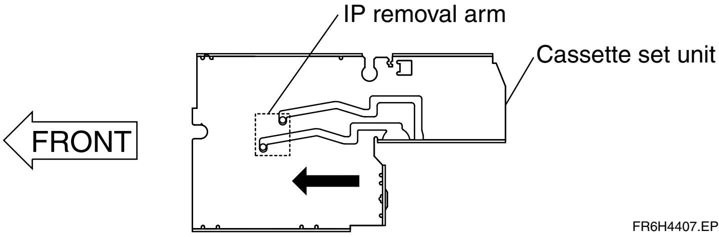
(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ “3.1 Removing and Reinstalling the Covers”

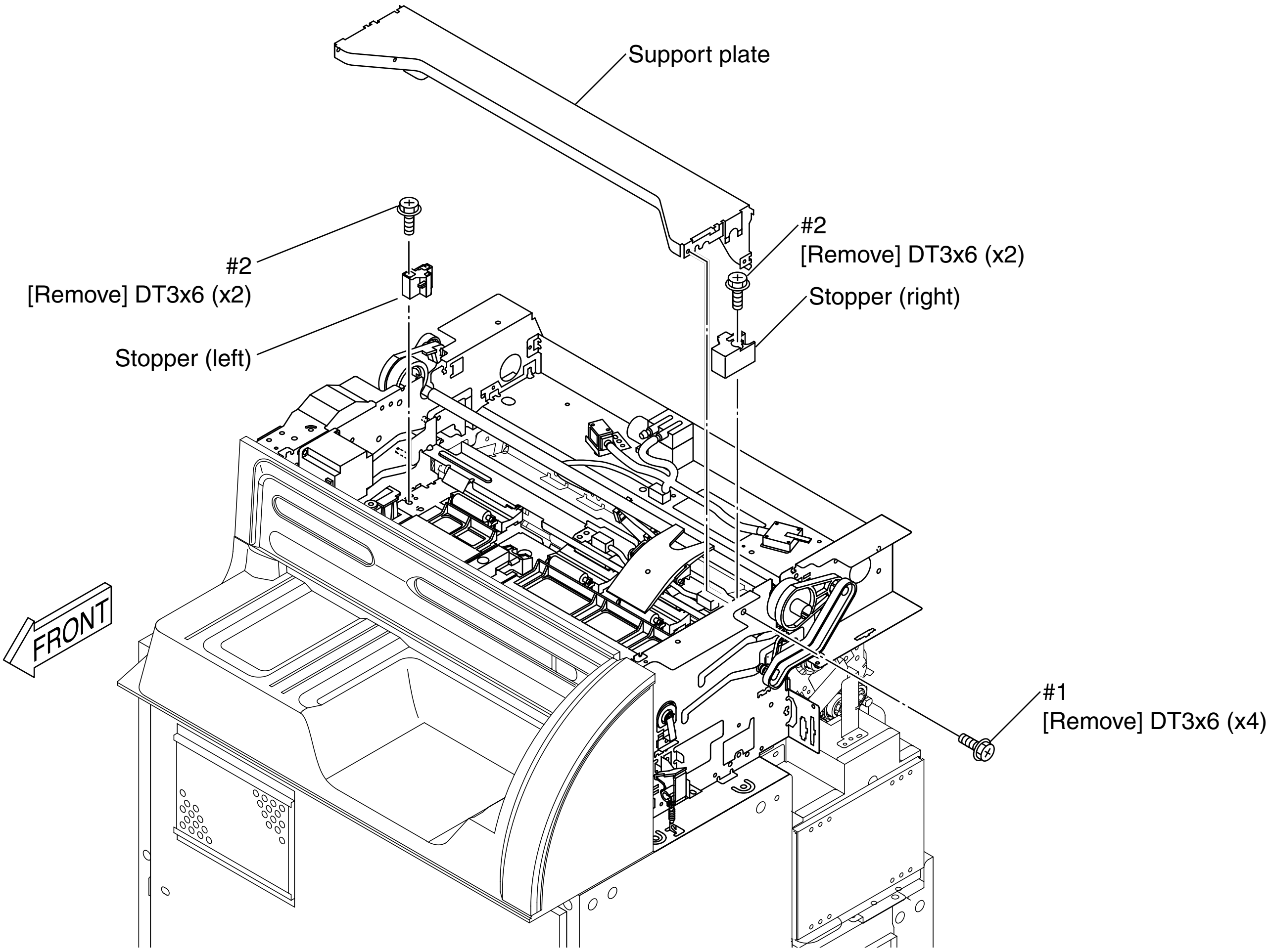
◆ ***NOTE*** ◆

Move the IP removal arm to its IP suction position before performing the procedures.


IP removal arm
Cassette set unit
FRONT

FR6H4407.EPS

(2) Remove the stopper (left) and stopper (right).

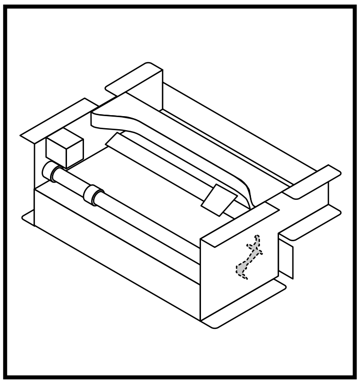

Support plate
#2
[Remove] DT3x6 (x2)
Stopper (right)
#2
[Remove] DT3x6 (x2)
Stopper (left)
FRONT
#1
[Remove] DT3x6 (x4)

FR6H4418.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.15 Actuator (Cassette IN Detection)



FR6H4457.EPS

■ Removal Procedures

(1) Remove the shelf cover assembly.

☞ “5.1 Shelf Cover Assembly”

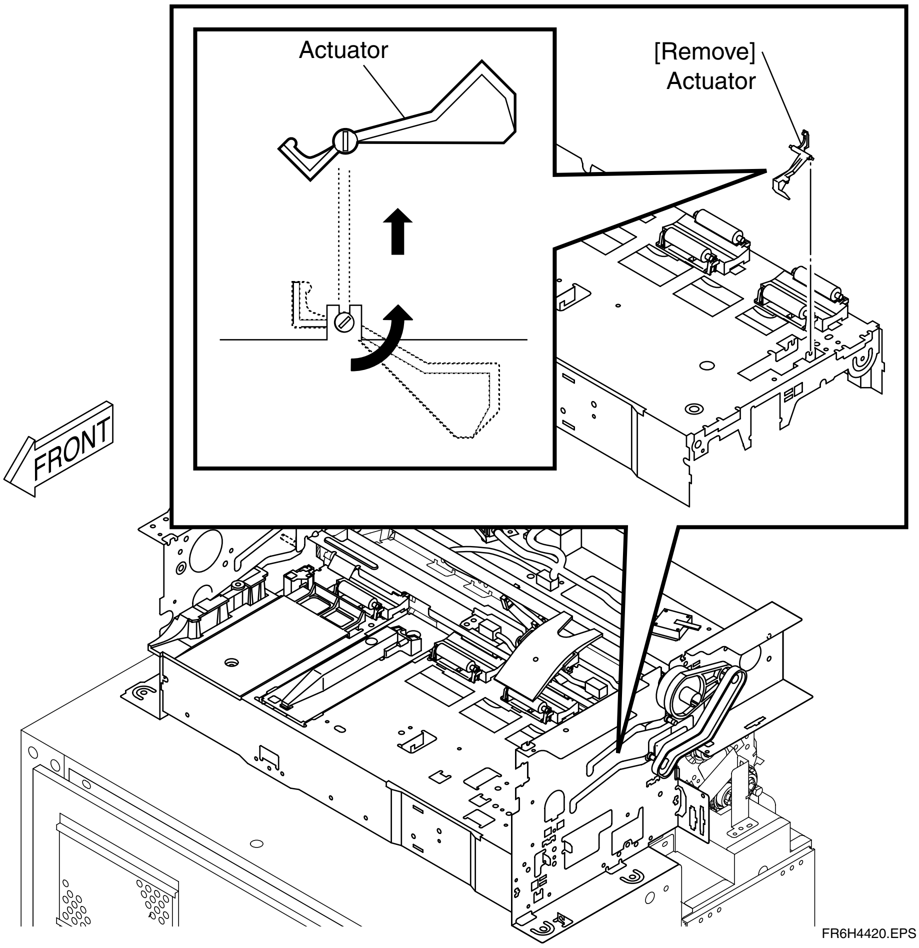
(2) Remove the guide plate (large).

☞ “5.13 Guide Plate”

(3) Remove the stopper (right).

☞ “5.14 Stopper”

(4) Remove the actuator.

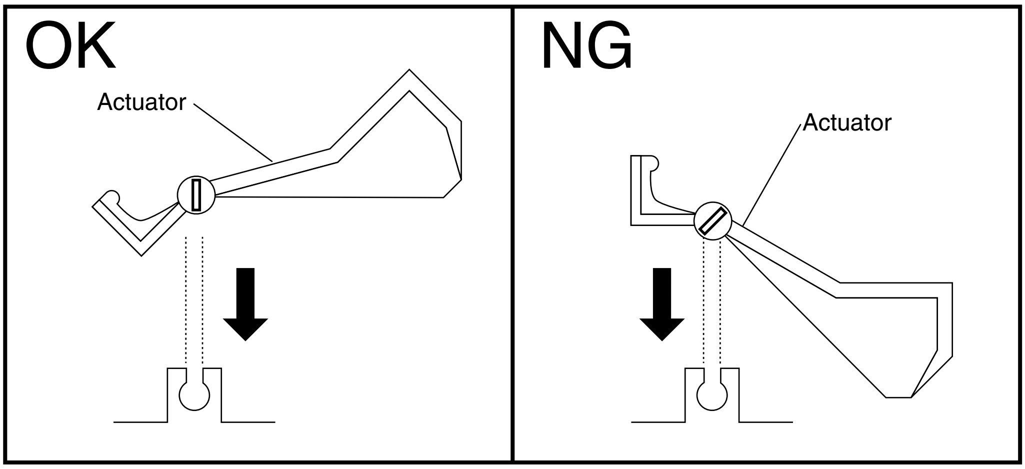


FR6H4420.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

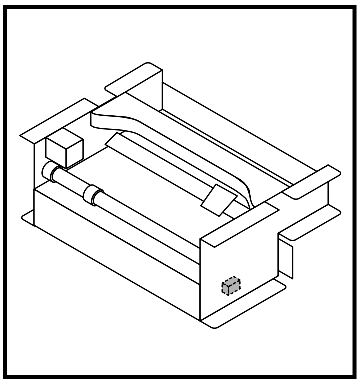
The actuator should be installed properly.


OK
Actuator
NG
Actuator

FR6H4421.EPS

For reinstallation, reverse the removal steps.

5.16 Sensor (SA2)


FR6H4461.EPS

■ Removal Procedures

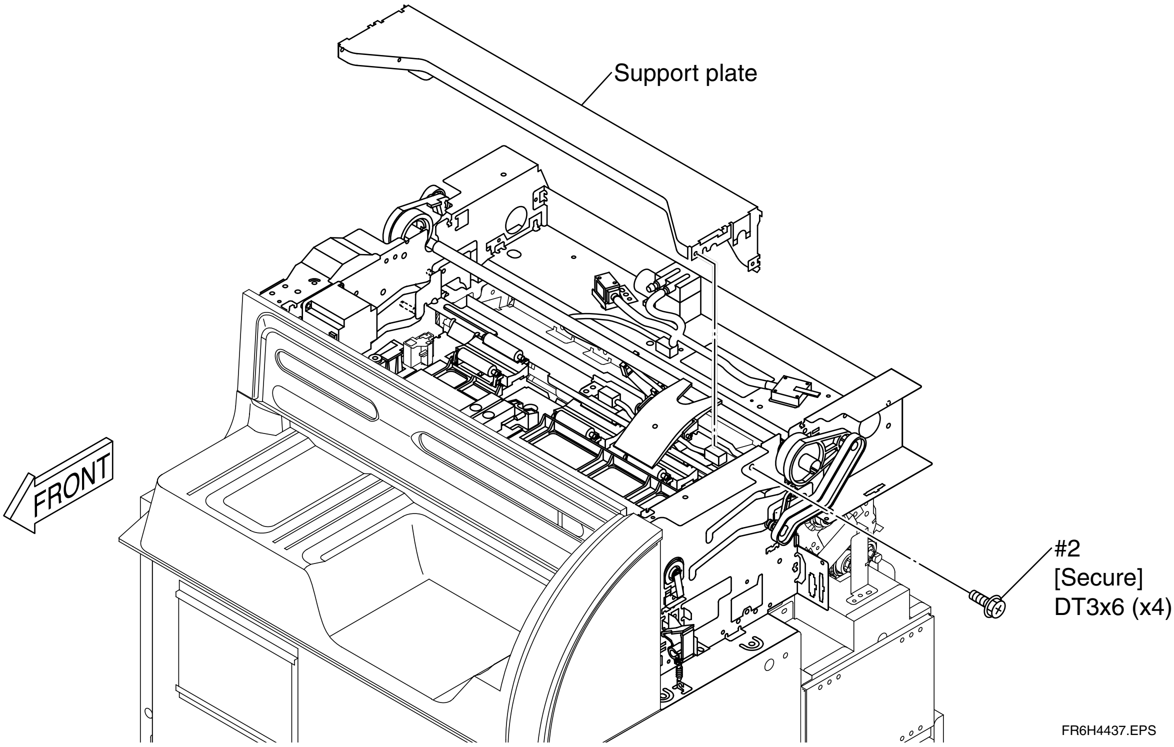
(1) Remove the cassette set unit.

☞ “5.3 Cassette Set Unit”

(2) Remove the actuator (cassette IN detection).

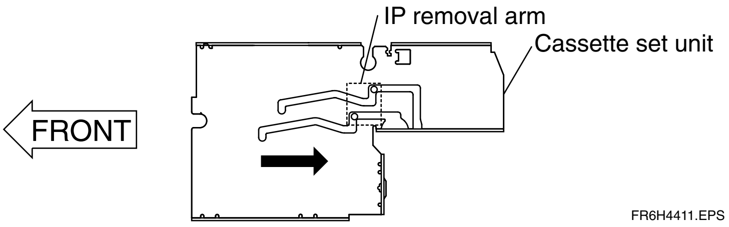
☞ “5.15 Actuator (Cassette IN Detection)

(3) Attach the support plate.

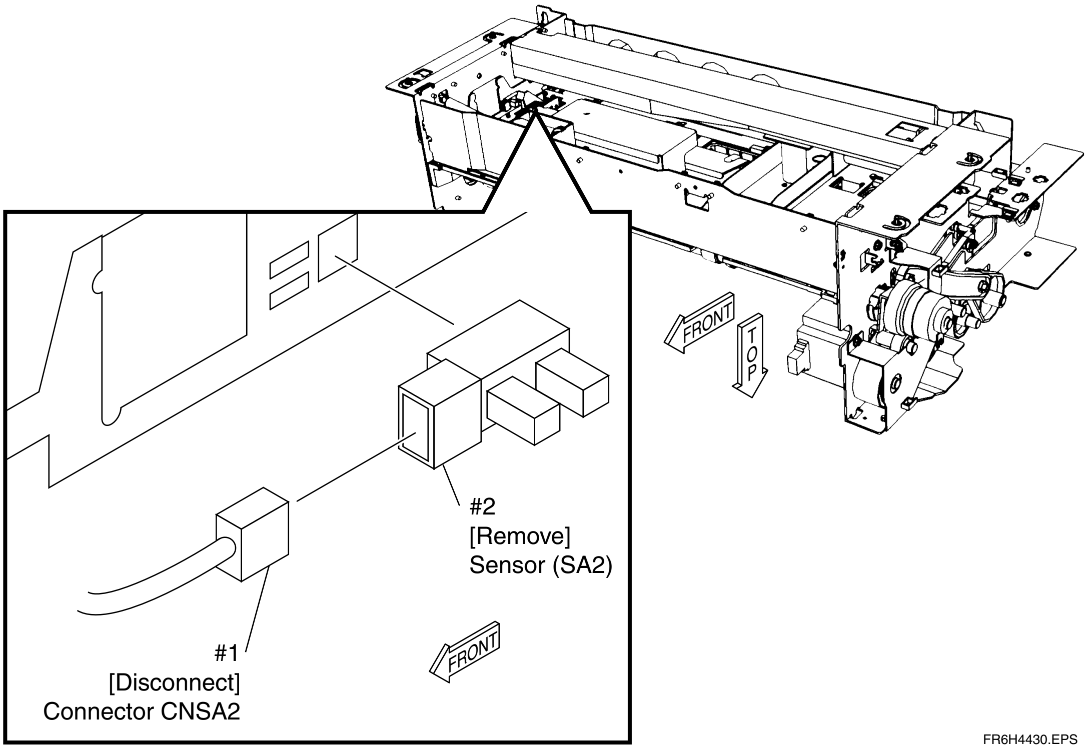

Support plate
FRONT
#2
[Secure]
DT3x6 (x4)
FR6H4437.EPS

◆ *NOTES* ◆

- *To remove the sensor (SA2), access it from behind the cassette set unit.*
- *Move the IP removal arm to its home position before performing the procedures.*


IP removal arm
Cassette set unit
FRONT
FR6H4411.EPS

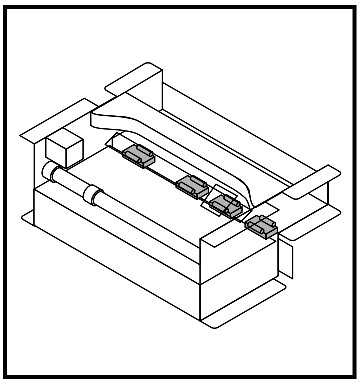
(4) Remove the sensor (SA2).


#2
[Remove]
Sensor (SA2)
#1
[Disconnect]
Connector CNSA2
FRONT
FRONT
TOP
FR6H4430.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.17 Roller Assembly



FR6H4458.EPS

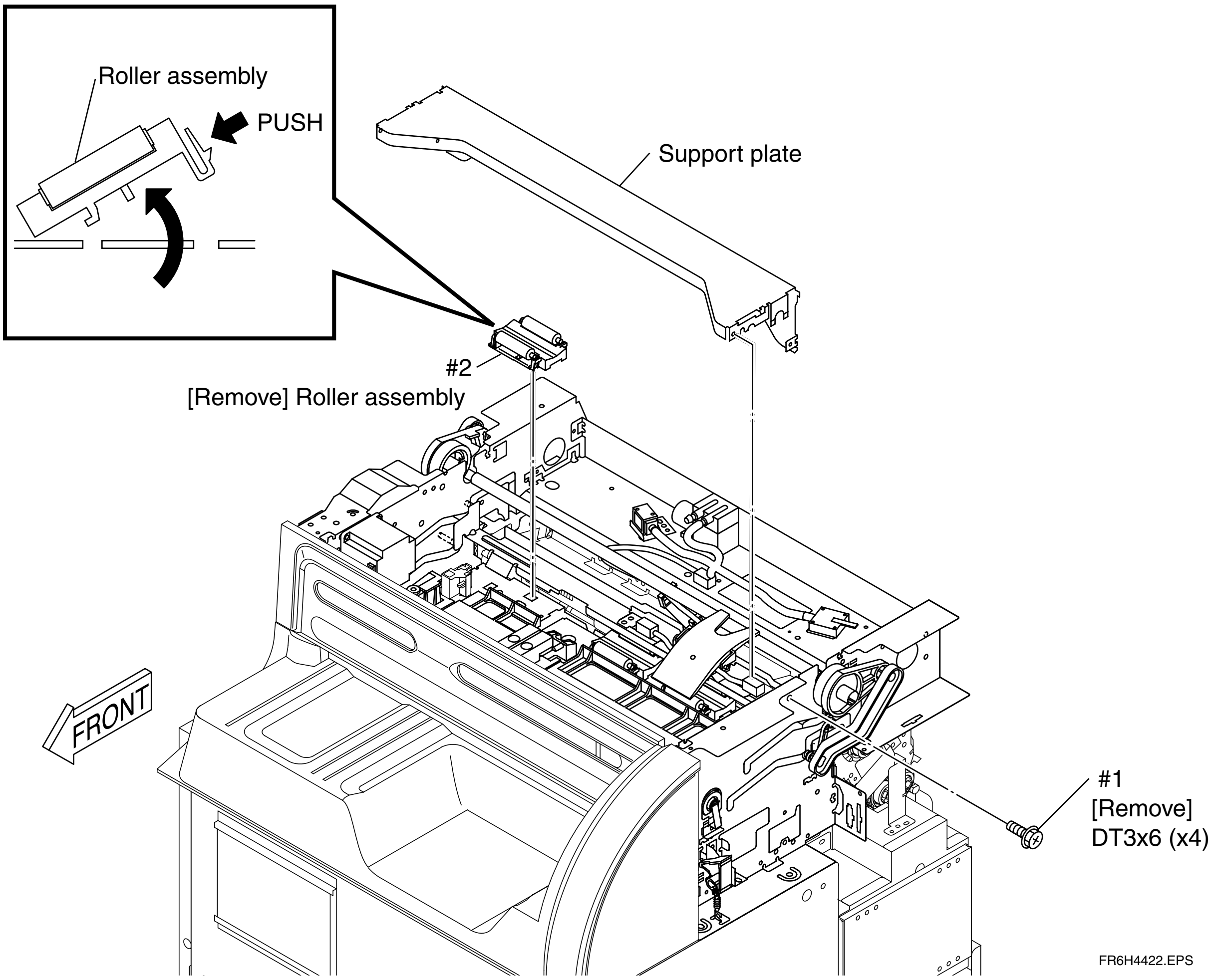
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the roller assembly.

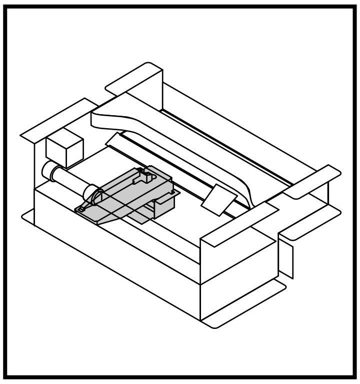

Roller assembly
PUSH
Support plate
#2
[Remove] Roller assembly
FRONT
#1
[Remove]
DT3x6 (x4)

FR6H4422.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

5.18 Movable Guide Assembly



FR6H4460.EPS

■ Removal Procedures

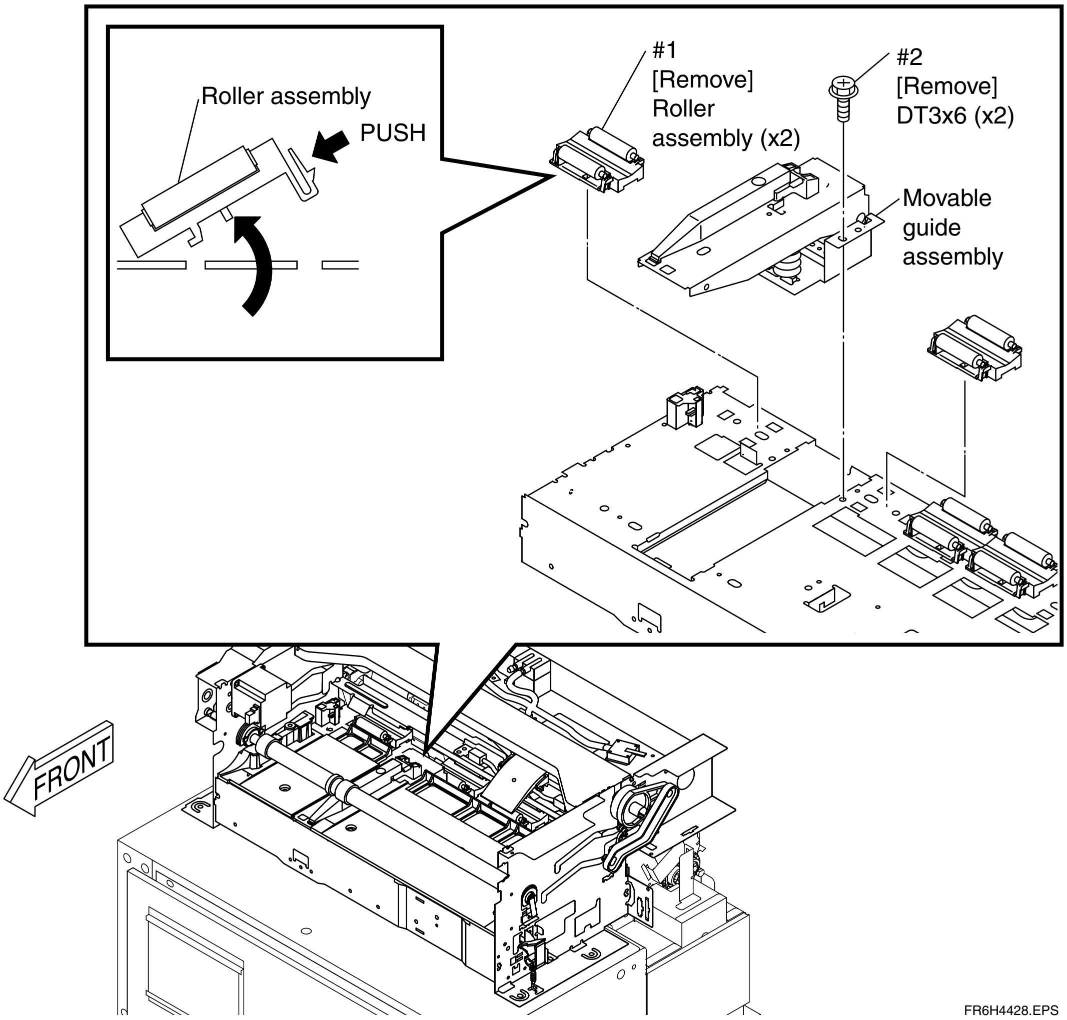
(1) Remove the guide plate.

☞ “5.13 Guide Plate”

(2) Remove the roller assembly.

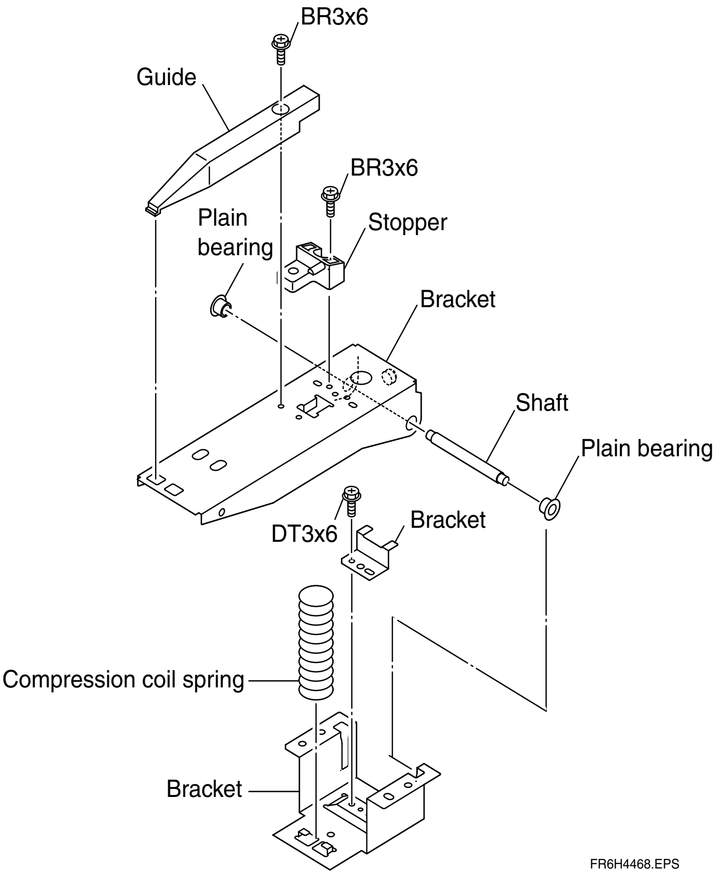
☞ “5.17 Roller Assembly”

(3) Remove the movable guide assembly.


Roller assembly
PUSH
#1
[Remove]
Roller
assembly (x2)
#2
[Remove]
DT3x6 (x2)
Movable
guide
assembly
FRONT

FR6H4428.EPS

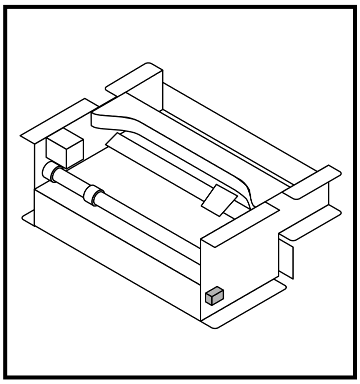
■ Exploded View


BR3x6
Guide
BR3x6
Plain bearing
Stopper
Bracket
Shaft
Plain bearing
DT3x6
Bracket
Compression coil spring
Bracket
FR6H4468.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

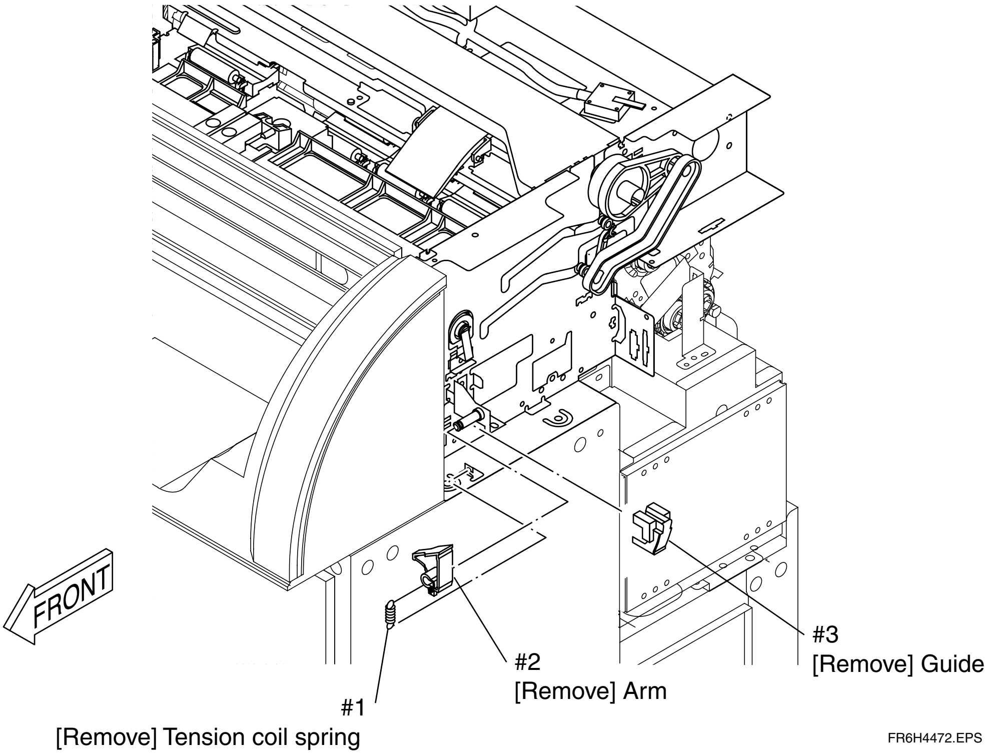
5.19 Sensor (SA3)



FR6H4471.EPS

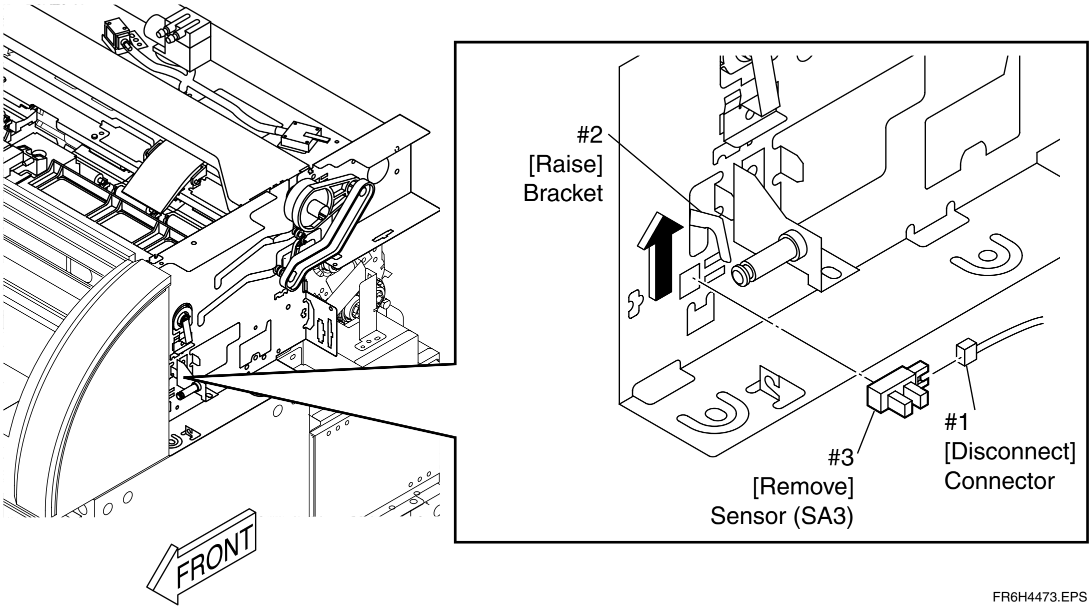
■ Removal Procedures

(1) Remove the guide.


FRONT
#1
[Remove] Tension coil spring
#2
[Remove] Arm
#3
[Remove] Guide

FR6H4472.EPS

(2) Remove the sensor (SA3).


#2
[Raise]
Bracket
#3
[Remove]
Sensor (SA3)
#1
[Disconnect]
Connector
FRONT

FR6H4473.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

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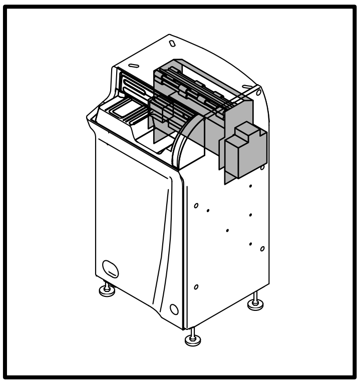
6. Removing and Reinstalling the Erasure Conveyor

6.1 Erasure Conveyor



FR6H4567.EPS

■ Removal Procedures

(1) Remove the cassette set unit.

☞ "5.3 Cassette Set Unit"

(2) Remove the rear cover.

☞ "3.1 Removing and Reinstalling the Covers"

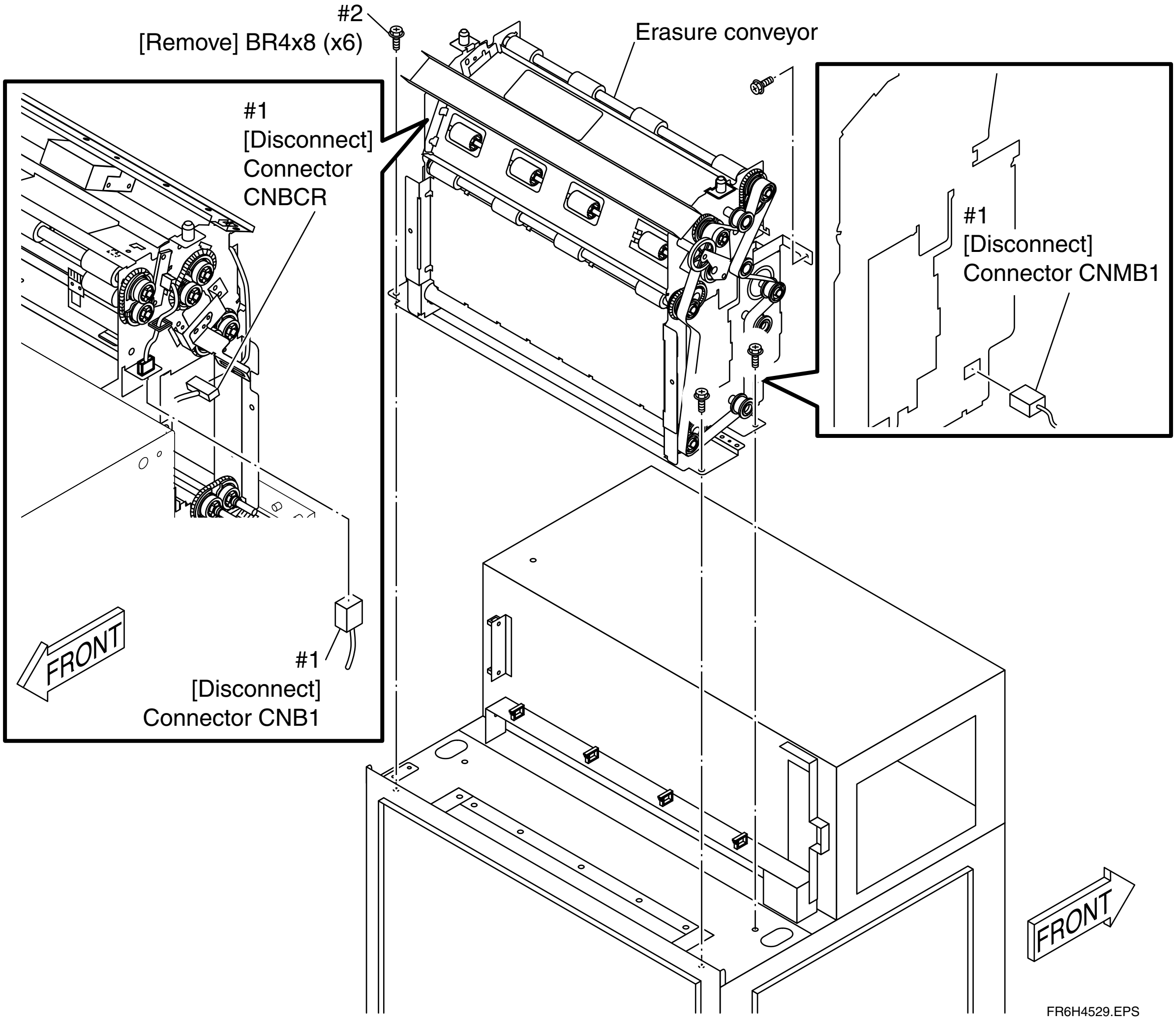
(3) Remove the lamp assembly.

☞ "6.2 Lamp Assembly"

(4) Remove the duct box.

☞ "6.7 Duct box"

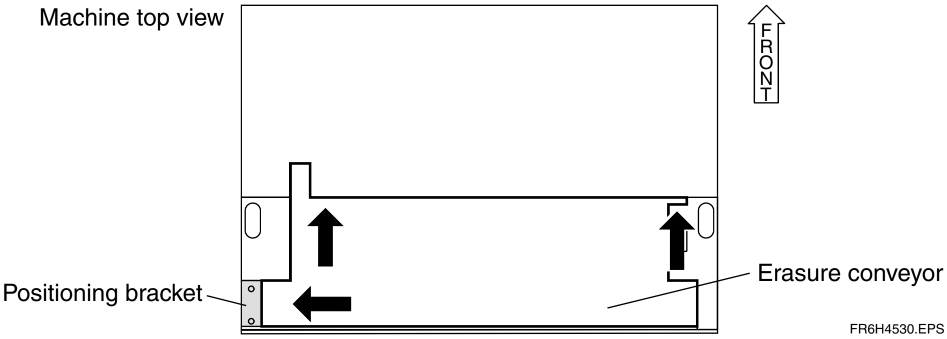
(5) Remove the erasure conveyor.


#2
[Remove] BR4x8 (x6)
Erasure conveyor
#1
[Disconnect]
Connector
CNBCR
#1
[Disconnect]
Connector CNMB1
#1
[Disconnect]
Connector CNB1
FRONT
FRONT
FR6H4529.EPS

■ Reinstallation Procedures

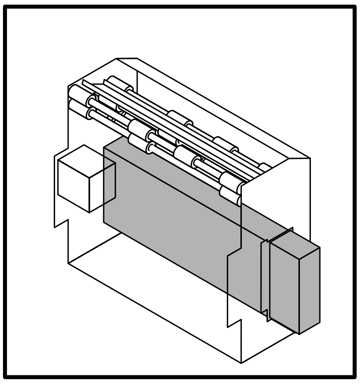
◆ NOTE ◆

When installing the erasure conveyor, align it against the positioning bracket.


Machine top view
FRONT
Positioning bracket
Erasure conveyor
FR6H4530.EPS

For reinstallation, reverse the removal steps.

6.2 Lamp Assembly



FR6H4551.EPS

◇ *REFERENCE* ◇

The lamp assembly is mounted along with rail.

■ Removal Procedures

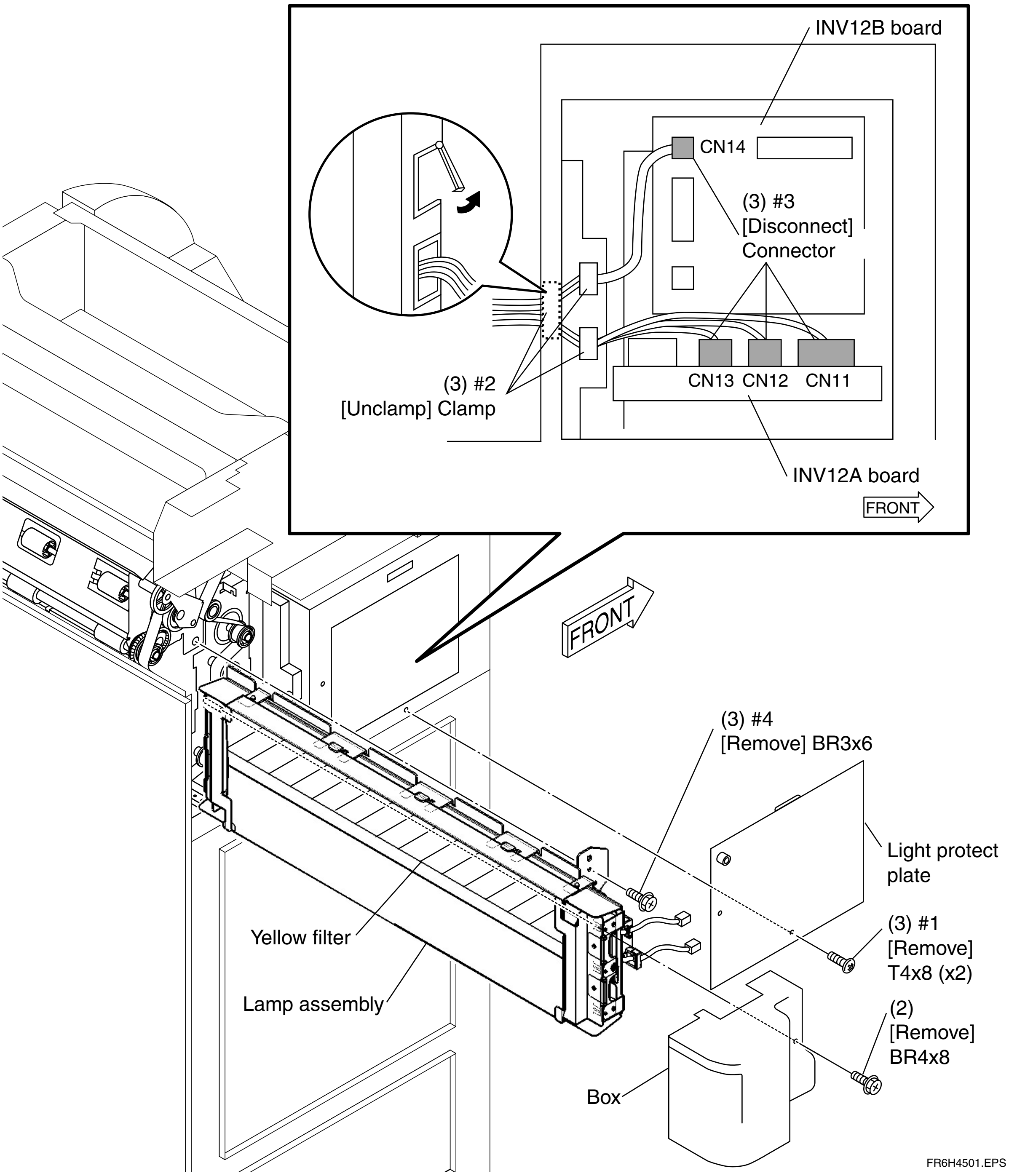
(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

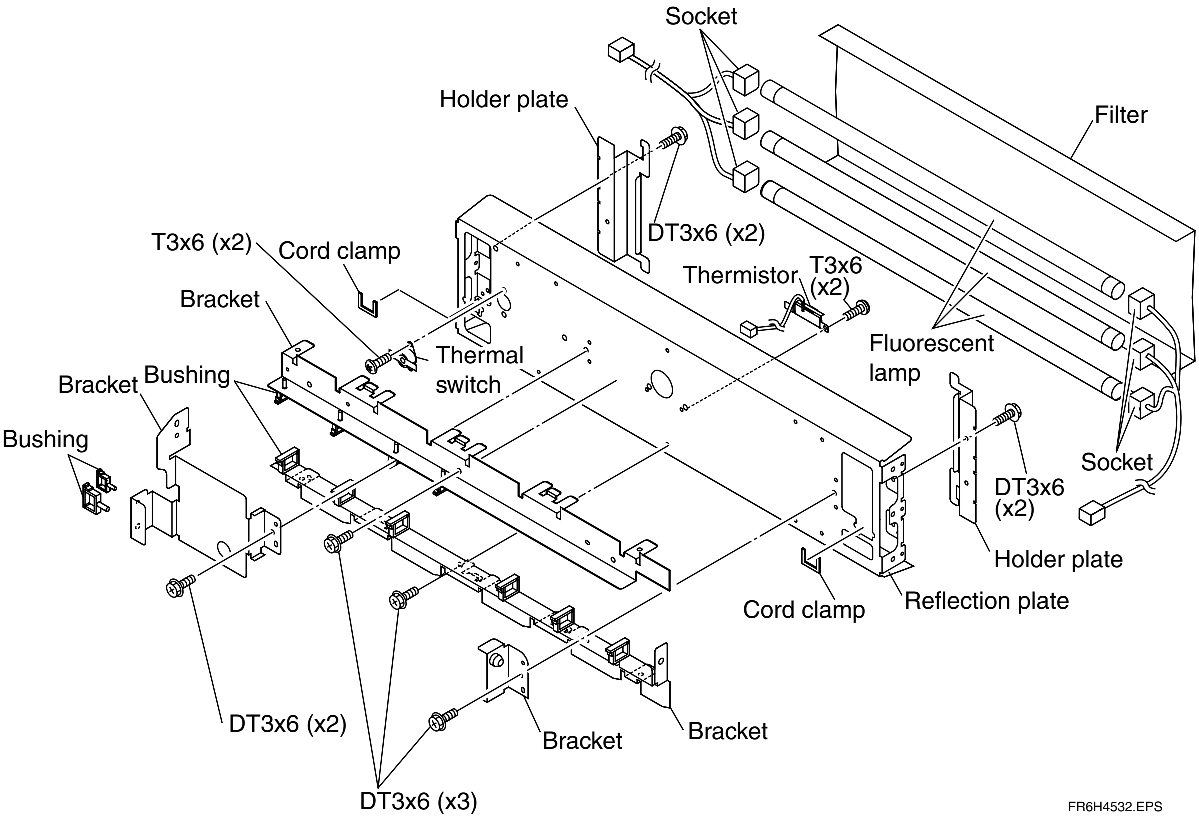
☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the box.

(3) Remove the lamp assembly.


INV12B board
CN14
(3) #3
[Disconnect]
Connector
(3) #2
[Unclamp] Clamp
CN13 CN12 CN11
INV12A board
FRONT
FRONT
(3) #4
[Remove] BR3x6
Light protect
plate
(3) #1
[Remove]
T4x8 (x2)
(2)
[Remove]
BR4x8
Yellow filter
Lamp assembly
Box
FR6H4501.EPS

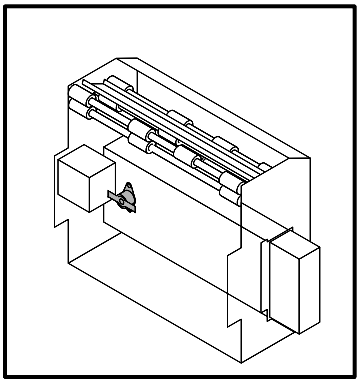
■ Exploded View


Socket
Holder plate
Filter
DT3x6 (x2)
T3x6 (x2)
Cord clamp
Thermistor
T3x6 (x2)
Bracket
Fluorescent lamp
Thermal switch
Bracket
Bushing
Bushing
Socket
DT3x6 (x2)
Holder plate
Reflection plate
Cord clamp
DT3x6 (x2)
Bracket
Bracket
DT3x6 (x3)
FR6H4532.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

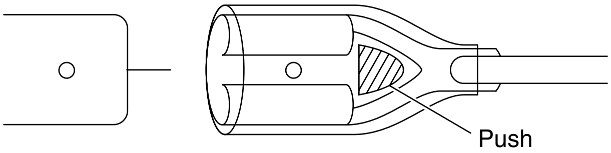
6.3 Thermal Switch (TSWB1)



FR6H4555.EPS

◆ *NOTE* ◆

To remove the FASTON terminal, push the shaded portion of the terminal illustrated below to detach it.



FR6H0001.EPS

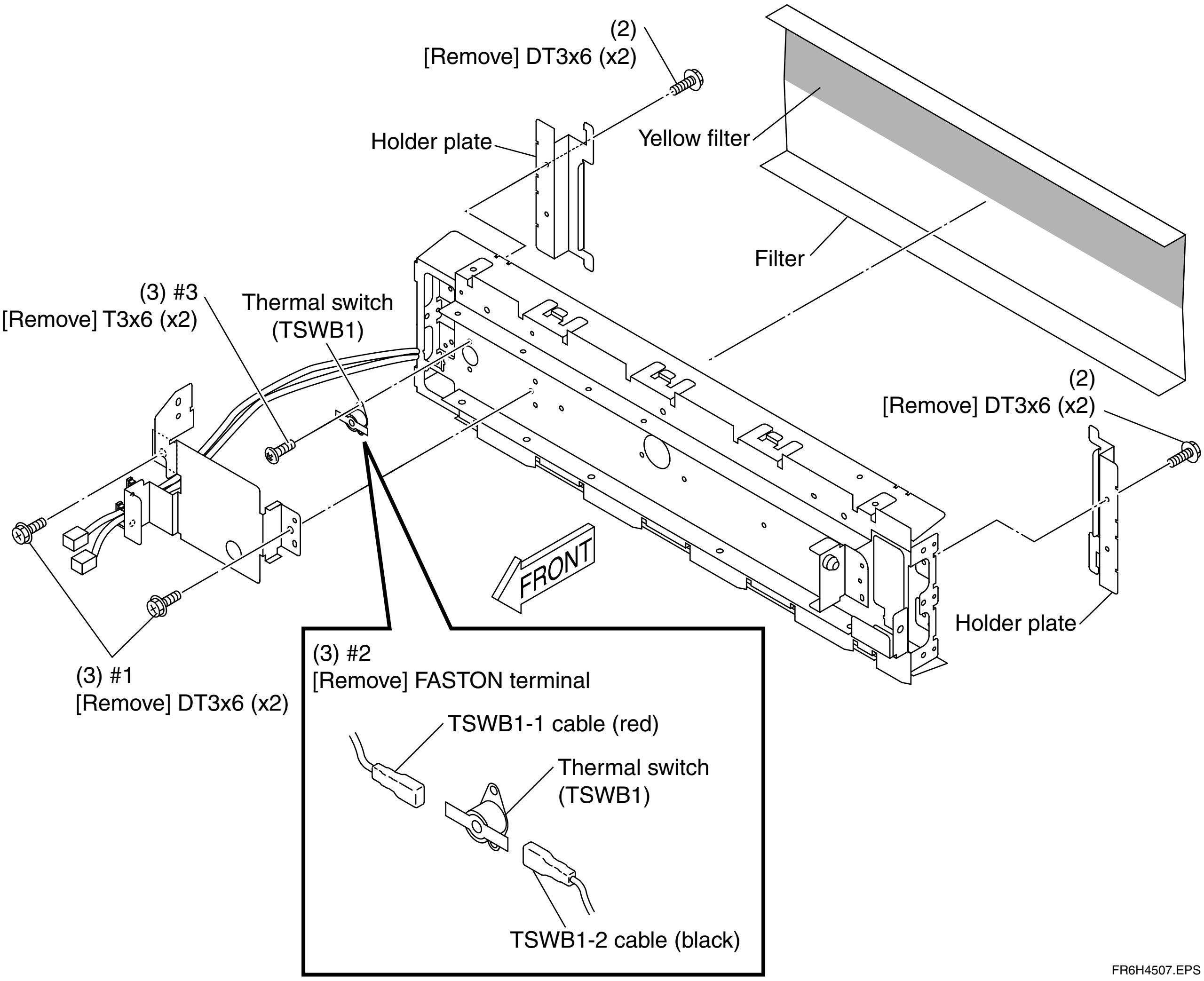
■ Removal Procedures

(1) Remove the lamp assembly.

☞ “6.2 Lamp Assembly”

(2) Remove the filter.

(3) Remove the thermal switch (TSWB1).


(2)
[Remove] DT3x6 (x2)
Holder plate
Yellow filter
Filter
(3) #3
[Remove] T3x6 (x2)
Thermal switch
(TSWB1)
(2)
[Remove] DT3x6 (x2)
FRONT
Holder plate
(3) #1
[Remove] DT3x6 (x2)
(3) #2
[Remove] FASTON terminal
TSWB1-1 cable (red)
Thermal switch
(TSWB1)
TSWB1-2 cable (black)

FR6H4507.EPS

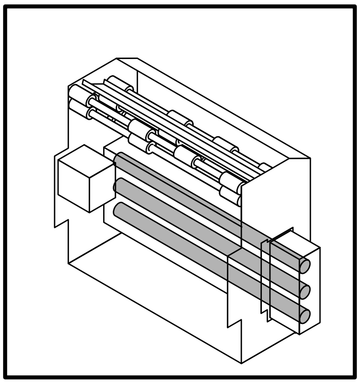
■ Reinstallation Procedures

◆ *NOTE* ◆

To attach the FASTON terminal, insert it all the way to secure it in place.

For reinstallation, reverse the removal steps.

6.4 Lamp



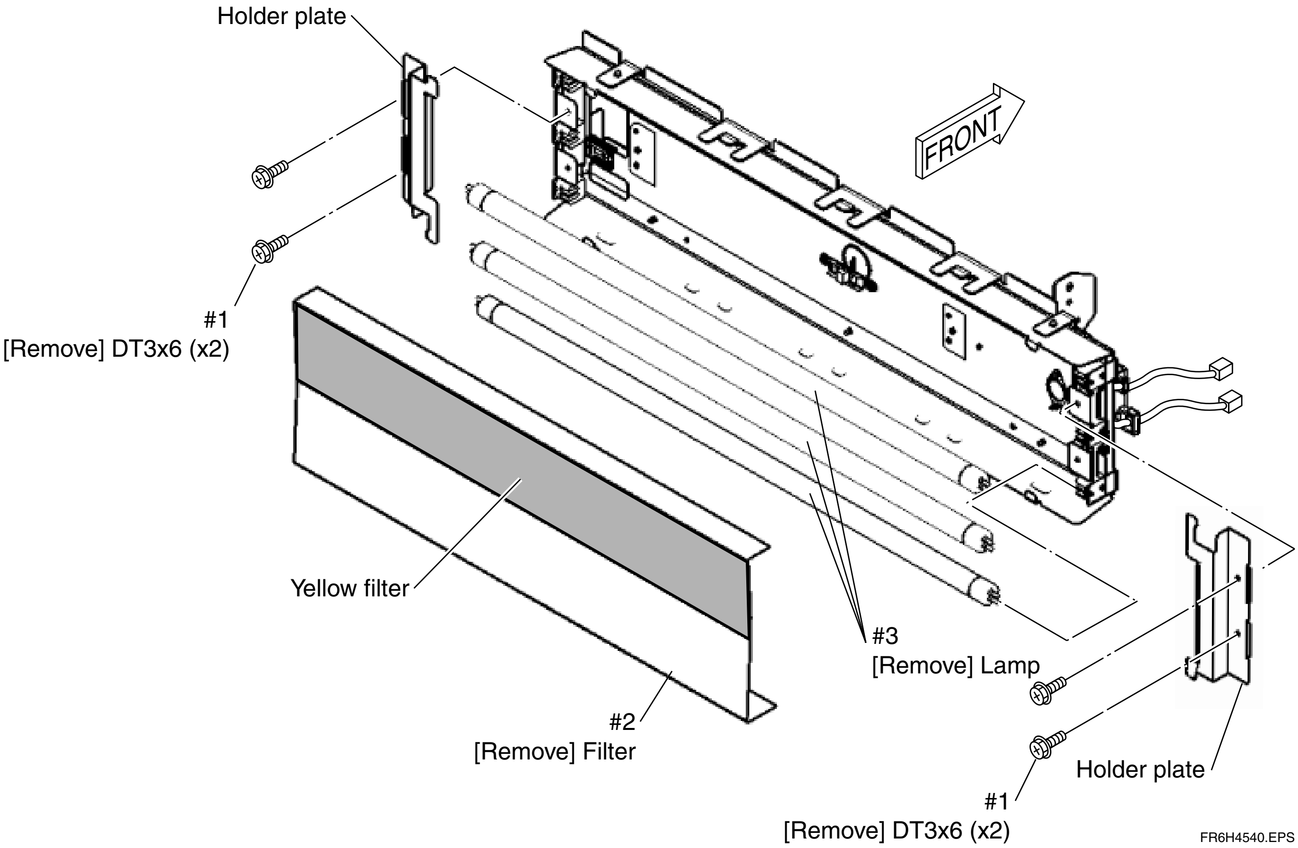
FR6H4552.EPS

■ Removal Procedures

(1) Remove the lamp assembly.

☞ "6.2 Lamp Assembly"

(2) Remove the lamps.

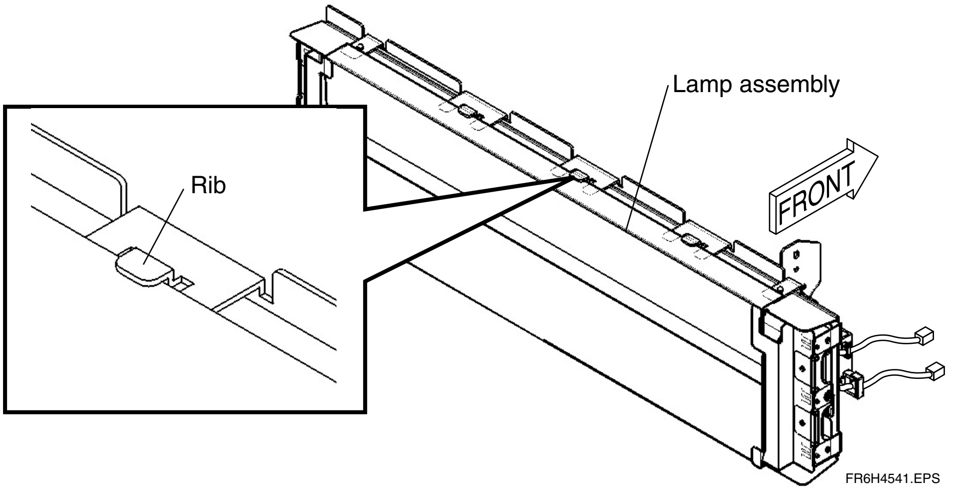

Holder plate
#1
[Remove] DT3x6 (x2)
FRONT
Yellow filter
#2
[Remove] Filter
#3
[Remove] Lamp
Holder plate
#1
[Remove] DT3x6 (x2)

FR6H4540.EPS

■ Reinstallation Procedures

◆ *NOTES* ◆

- *After installing the filter, wipe the filter with a moistened cloth.*
- *To install the filter, put the filter under the rib of the lamp assembly.*


Lamp assembly
Rib
FRONT
FR6H4541.EPS

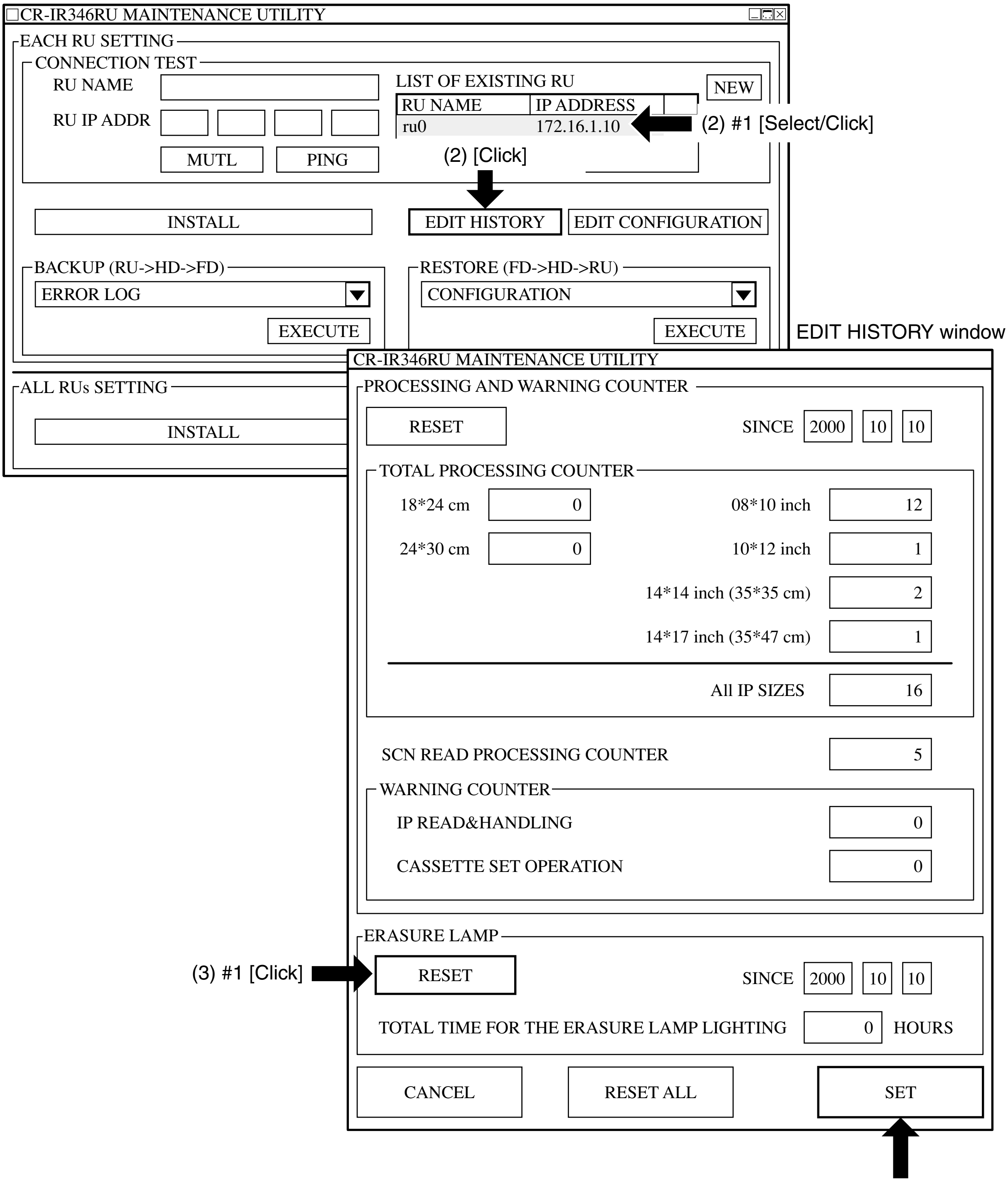
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Reset the erasure lamp lightening time.

(1) Open the MAINTENANCE UTILITY window.
(2) Open the EDIT HISTORY window.
(3) Reset the erasure lamp lightening time.

MAINTENANCE UTILITY window



☐CR-IR346RU MAINTENANCE UTILITY

EACH RU SETTING

CONNECTION TEST

RU NAME
RU IP ADDR

LIST OF EXISTING RU

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD): ERROR LOG

RESTORE (FD->HD->RU): CONFIGURATION

ALL RUs SETTING

EDIT HISTORY window

CR-IR346RU MAINTENANCE UTILITY

PROCESSING AND WARNING COUNTER

SINCE 2000 10 10

TOTAL PROCESSING COUNTER

18*24 cm	0	08*10 inch	12
24*30 cm	0	10*12 inch	1
		14*14 inch (35*35 cm)	2
		14*17 inch (35*47 cm)	1
		All IP SIZES	16

SCN READ PROCESSING COUNTER 5

WARNING COUNTER

IP READ&HANDLING 0
CASSETTE SET OPERATION 0

ERASURE LAMP

SINCE 2000 10 10

TOTAL TIME FOR THE ERASURE LAMP LIGHTING 0 HOURS

NEW
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
EXECUTE
EXECUTE
INSTALL
RESET
RESET
CANCEL
RESET ALL
SET

(2) #1 [Select/Click]

(2) [Click]

(3) #1 [Click]

(3) #2 [Click]

FR6H4568.EPS

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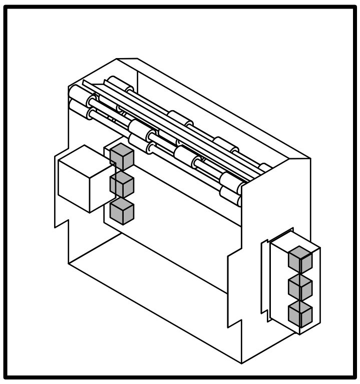
6.5 Lamp Socket



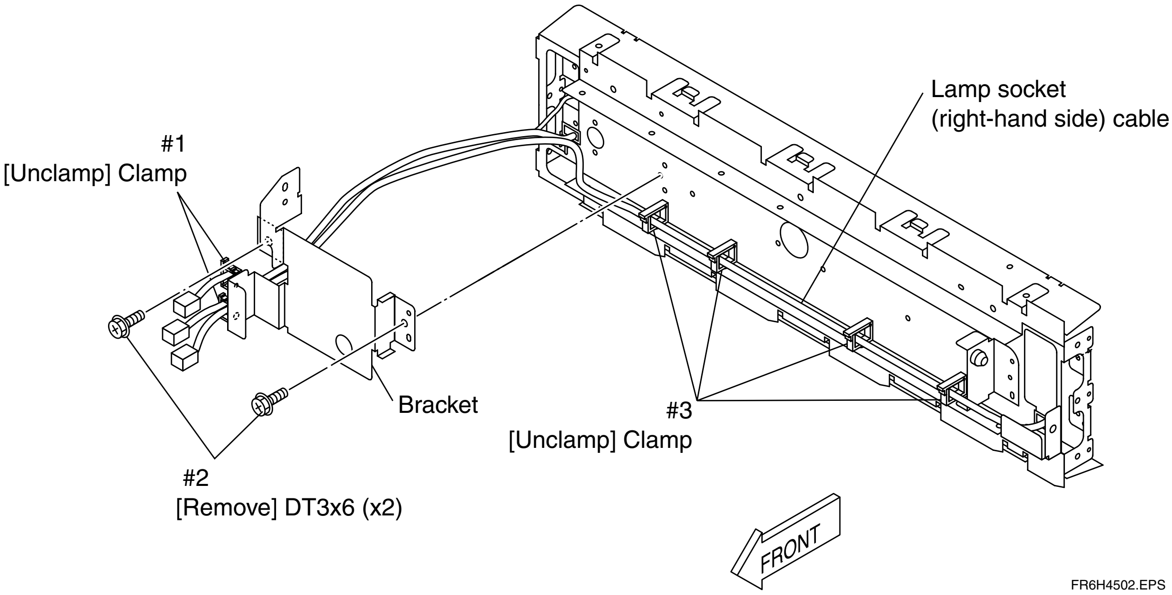
FR6H4553.EPS

■ Removal Procedures

(1) Remove the lamp.

☞ "6.4 Lamp"

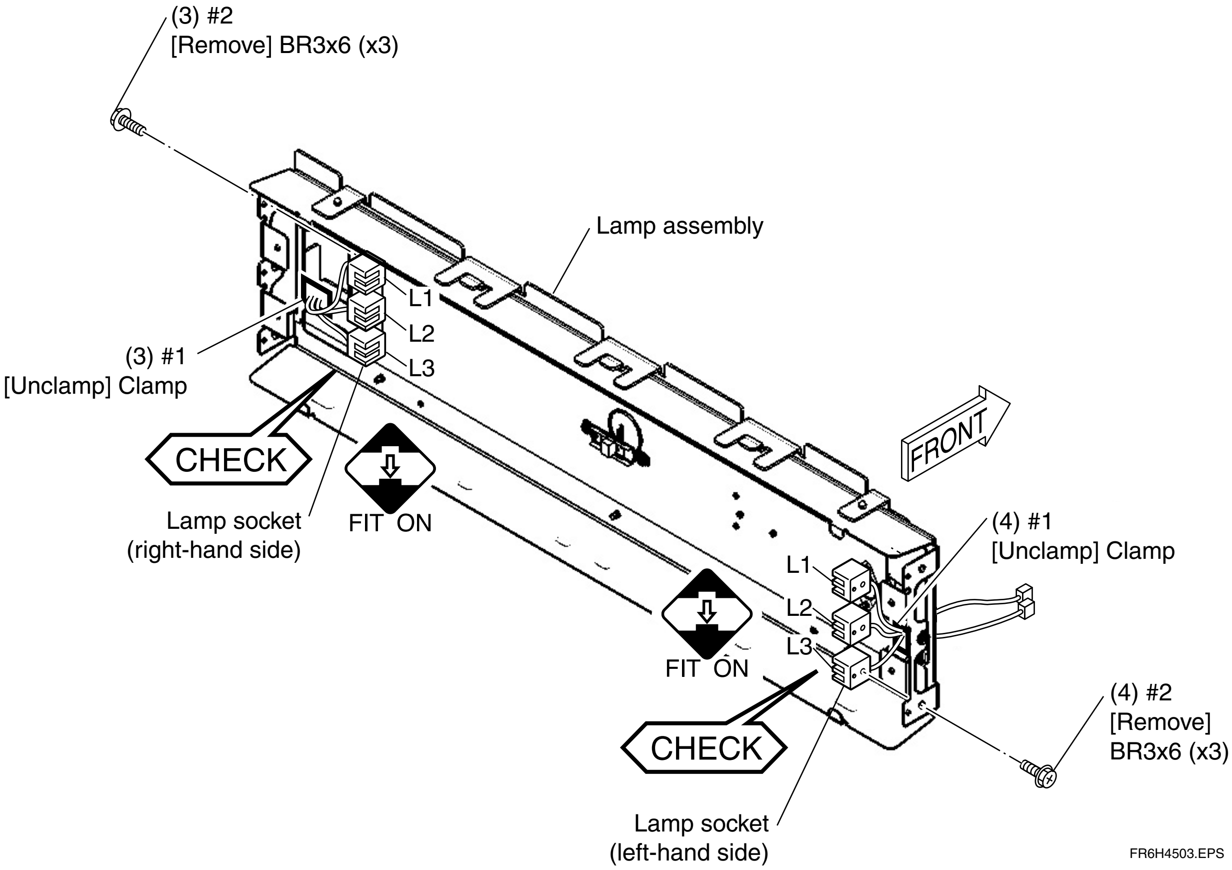
(2) Remove the bracket.


Lamp socket
(right-hand side) cable
#1
[Unclamp] Clamp
Bracket
#3
[Unclamp] Clamp
#2
[Remove] DT3x6 (x2)
FRONT

FR6H4502.EPS

(3) Remove the lamp socket (right-hand side).

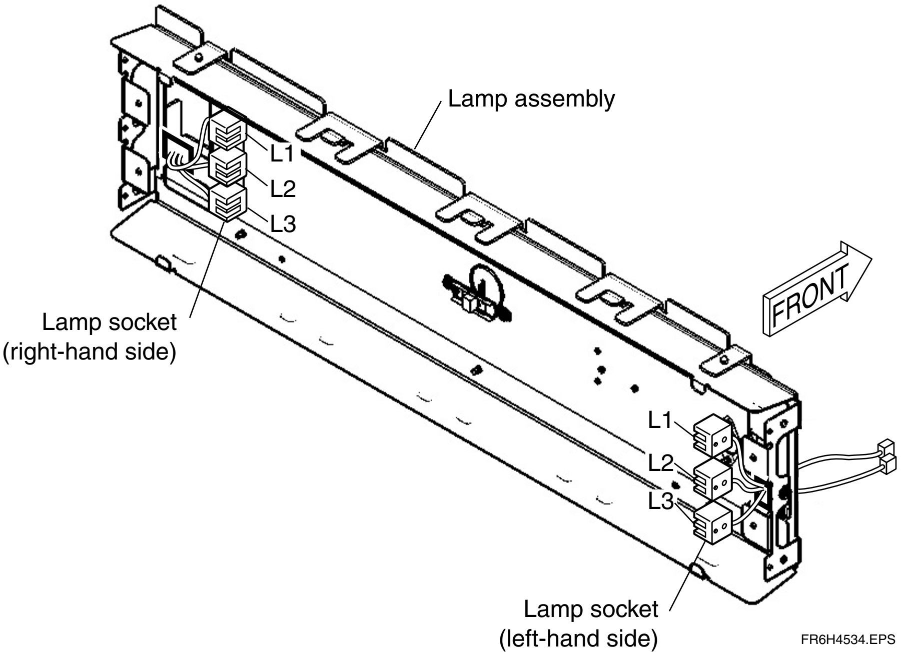
(4) Remove the lamp socket (left-hand side).


(3) #2
[Remove] BR3x6 (x3)
Lamp assembly
L1
L2
L3
(3) #1
[Unclamp] Clamp
CHECK
FIT ON
Lamp socket
(right-hand side)
FRONT
(4) #1
[Unclamp] Clamp
L1
L2
L3
FIT ON
CHECK
(4) #2
[Remove]
BR3x6 (x3)
Lamp socket
(left-hand side)
FR6H4503.EPS

■ Reinstallation Procedures

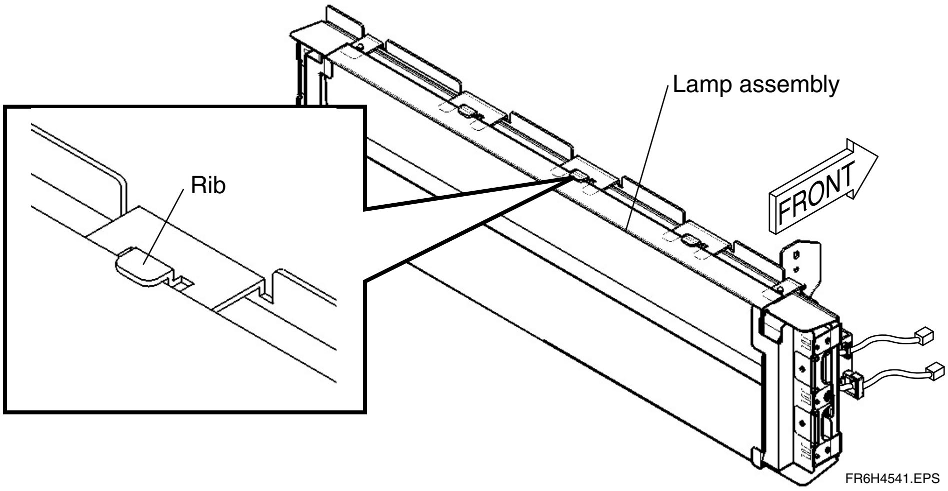
◆ *INSTRUCTION* ◆

When installing the lamp sockets, they should be installed in place as illustrated below.


Lamp assembly
L1
L2
L3
Lamp socket
(right-hand side)
FRONT
L1
L2
L3
Lamp socket
(left-hand side)
FR6H4534.EPS

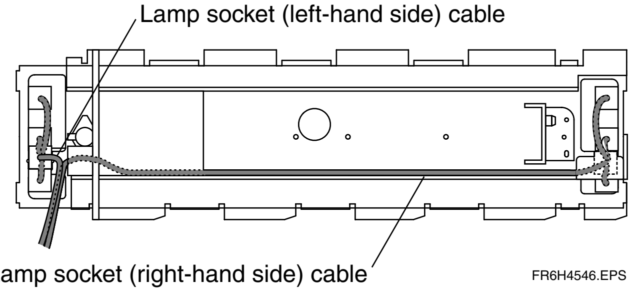
◆ *NOTES* ◆

- *After installing the filter, wipe the filter with a moistened cloth.*
- *To install the filter, put the filter under the rib of the lamp assembly.*


Lamp assembly
Rib
FRONT
FR6H4541.EPS

◇ *REFERENCE* ◇

Cable route

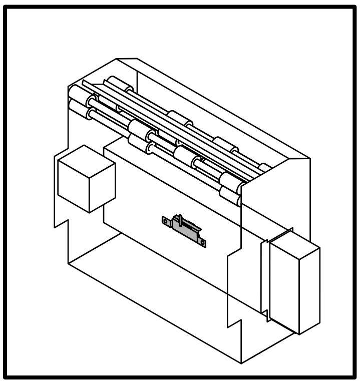

Lamp socket (left-hand side) cable
Lamp socket (right-hand side) cable
FR6H4546.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the lamp sockets are installed in their proper position.

6.6 Thermistor



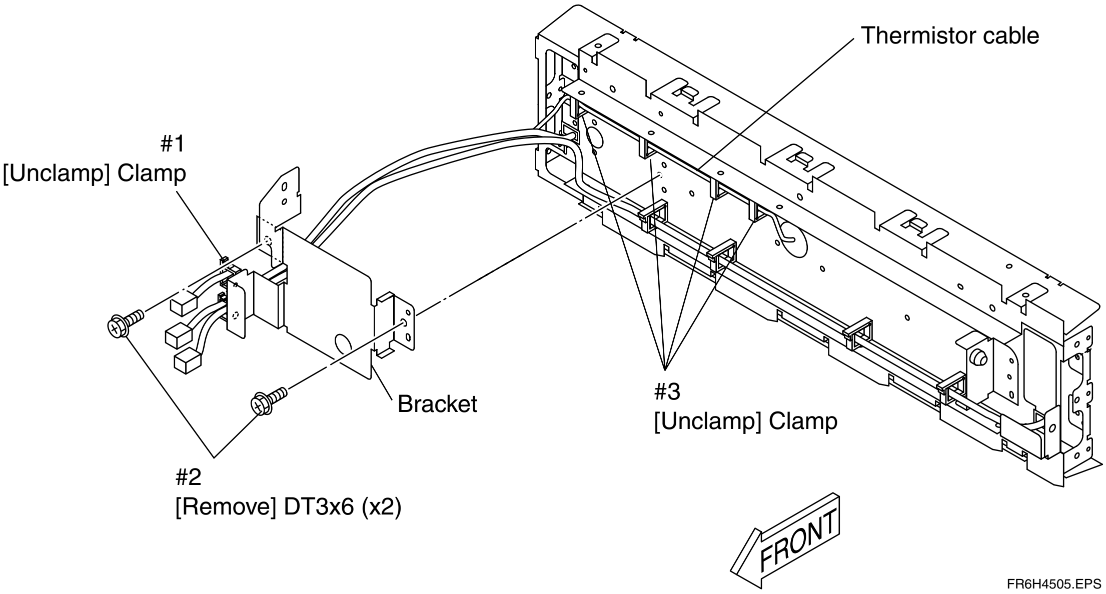
FR6H4554.EPS

■ Removal Procedures

(1) Remove the lamp.

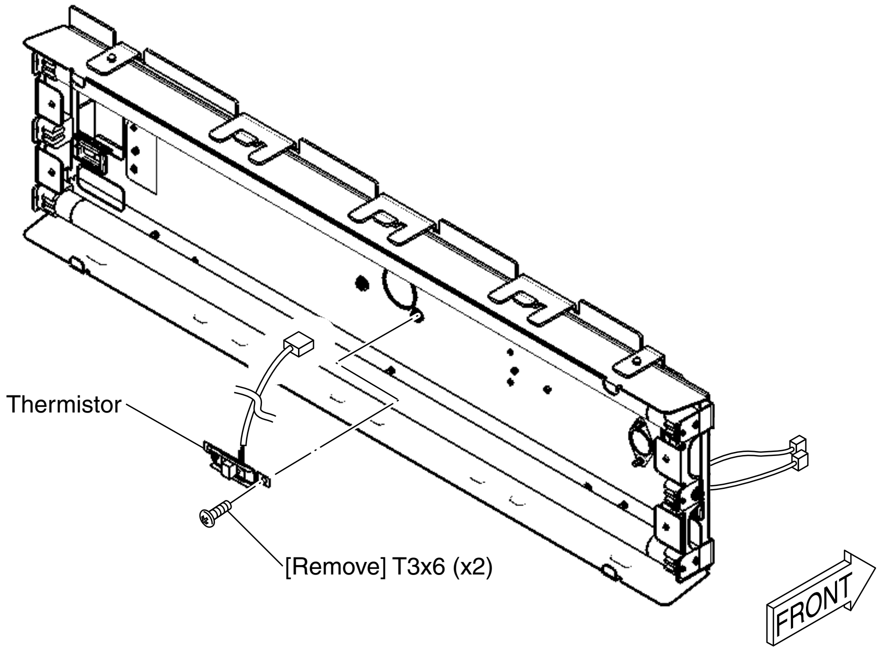
☞ "6.4 Lamp"

(2) Remove the bracket.


Thermistor cable
#1
[Unclamp] Clamp
Bracket
#3
[Unclamp] Clamp
#2
[Remove] DT3x6 (x2)
FRONT

FR6H4505.EPS

(3) Remove the thermistor.

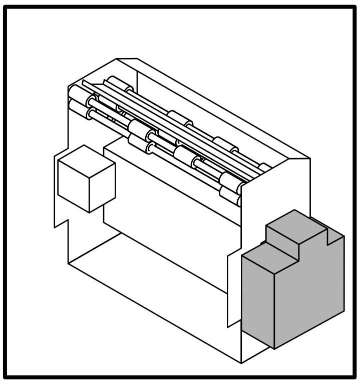

Thermistor
[Remove] T3x6 (x2)
FRONT

FR6H4506.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

6.7 Duct Box



FR6H4556.EPS

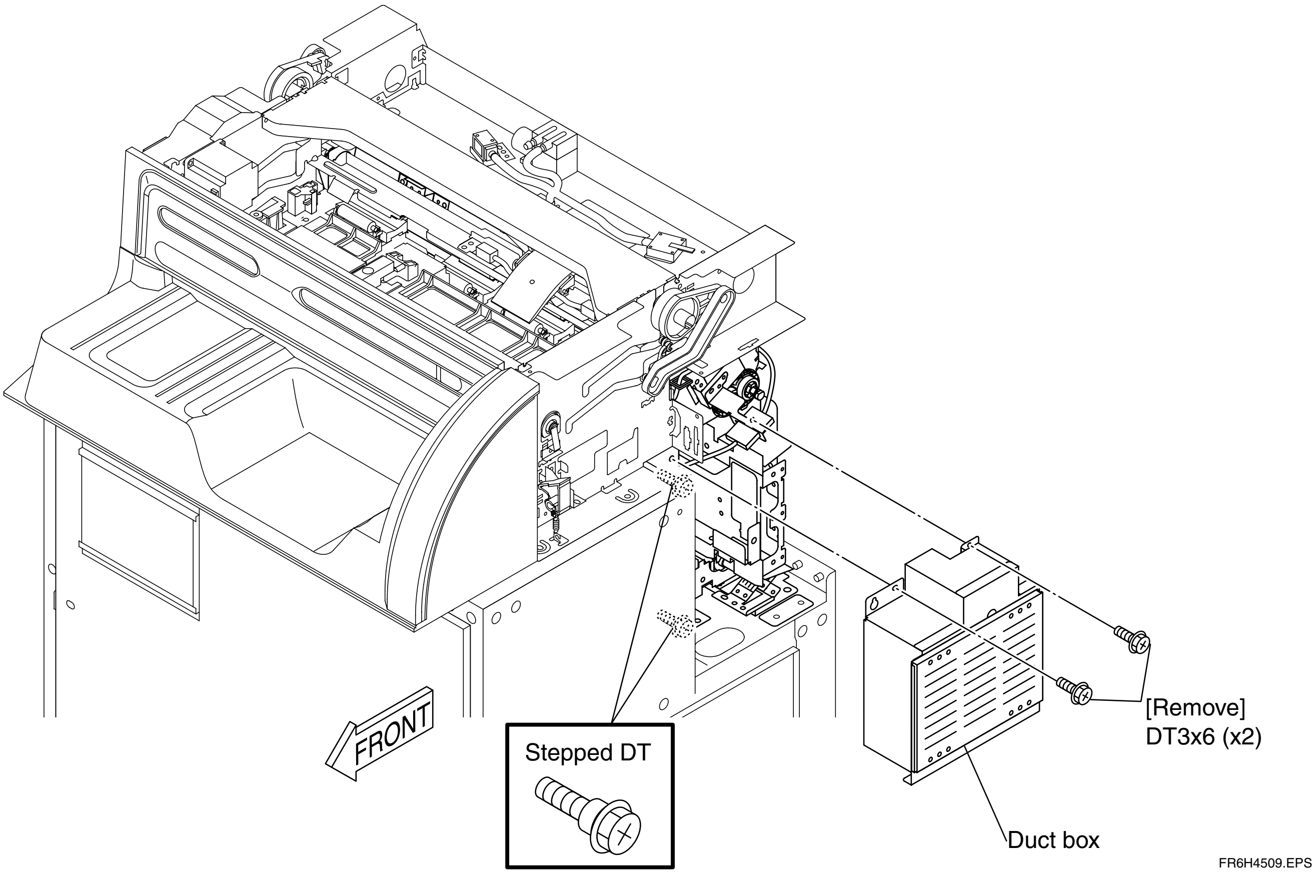
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ "3.1 Removing and Reinstalling the Covers"

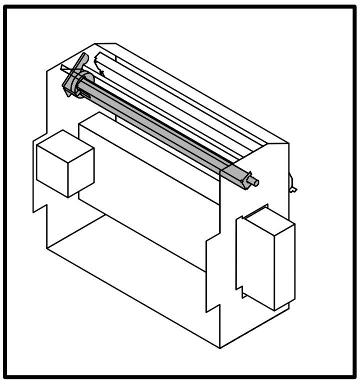
(2) Remove the duct box.


FRONT
Stepped DT
[Remove]
DT3x6 (x2)
Duct box
FR6H4509.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

6.8 Cleaning Roller Assembly



FR6H4557.EPS

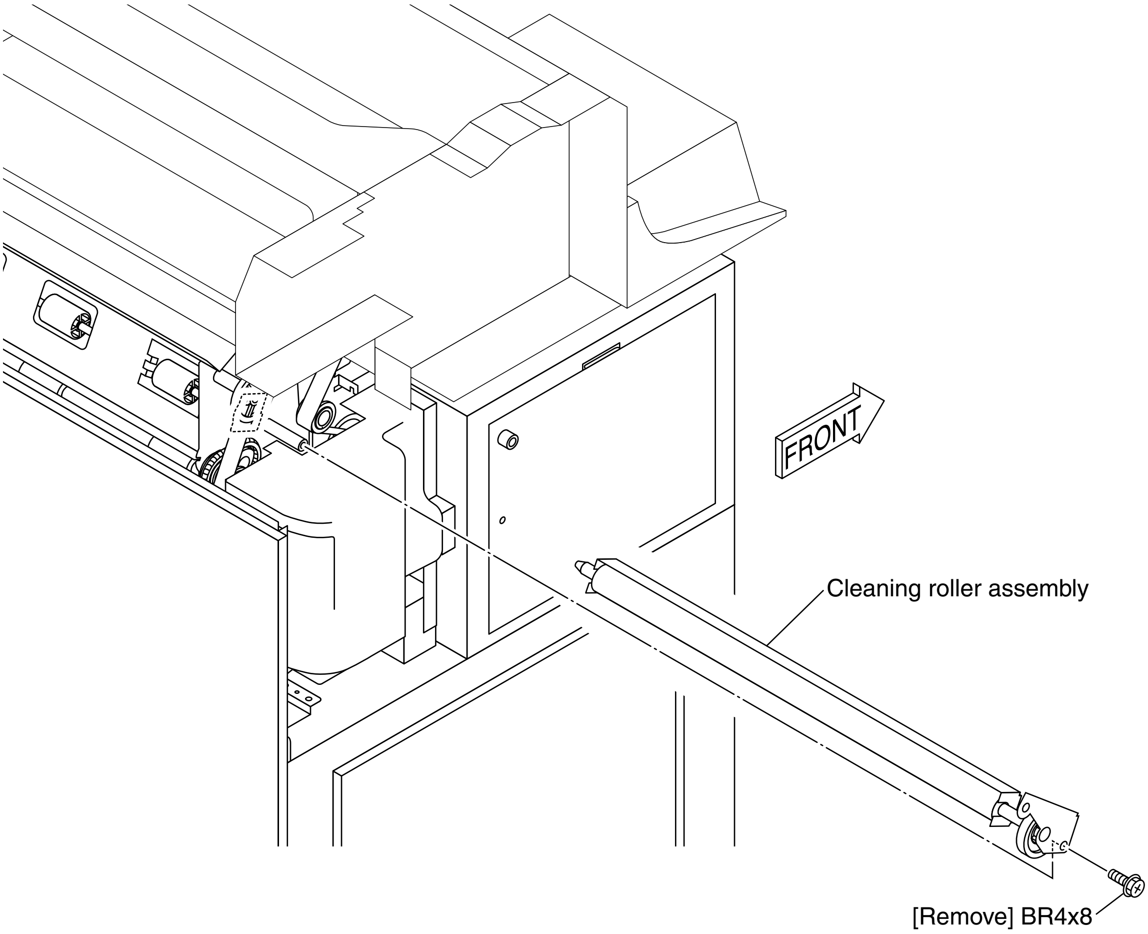
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

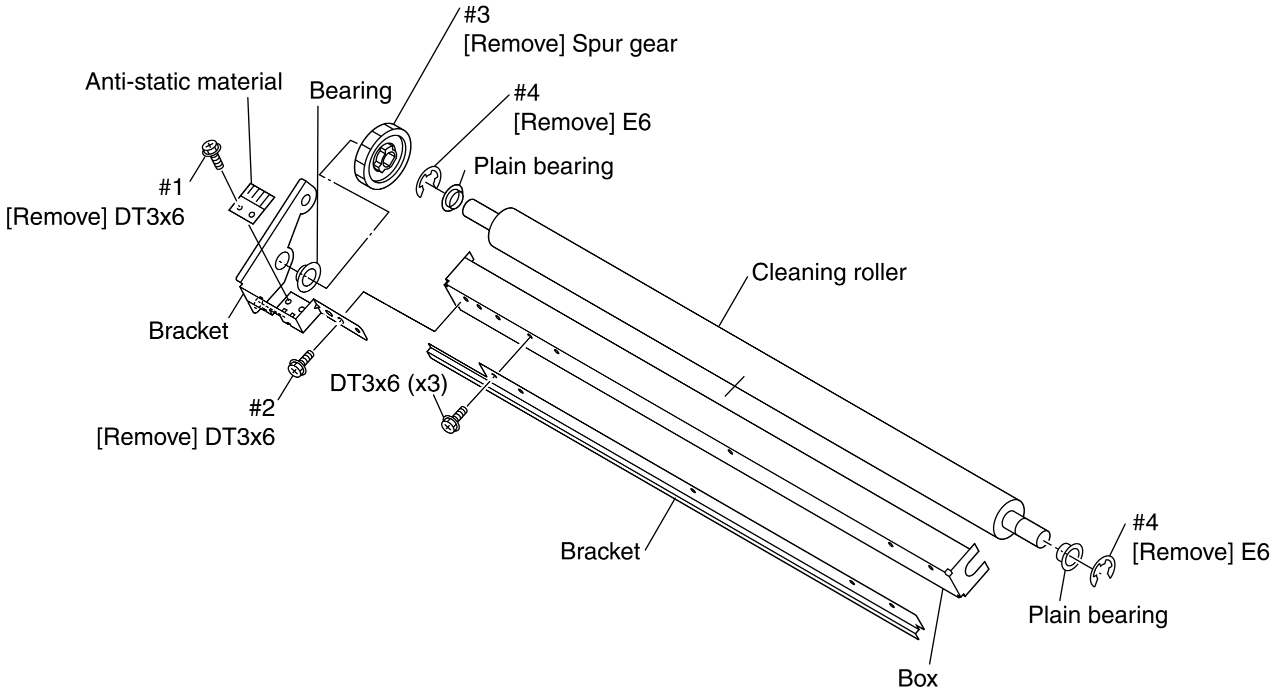
☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the cleaning roller assembly.


FRONT
Cleaning roller assembly
[Remove] BR4x8

FR6H4510.EPS

■ Exploded View

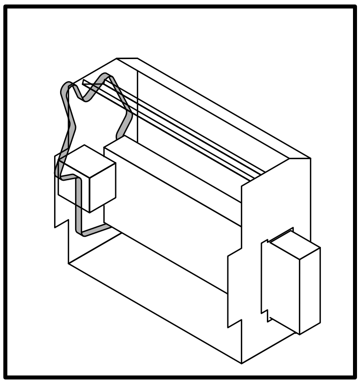

#3
[Remove] Spur gear
Anti-static material
Bearing
#4
[Remove] E6
Plain bearing
#1
[Remove] DT3x6
Cleaning roller
Bracket
DT3x6 (x3)
#2
[Remove] DT3x6
Bracket
#4
[Remove] E6
Plain bearing
Box

FR6H4533.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

6.9 Timing Belt



FR6H4558.EPS

■ Removal Procedures

(1) Remove the cassette set unit.

☞ “5.3 Cassette Set Unit”

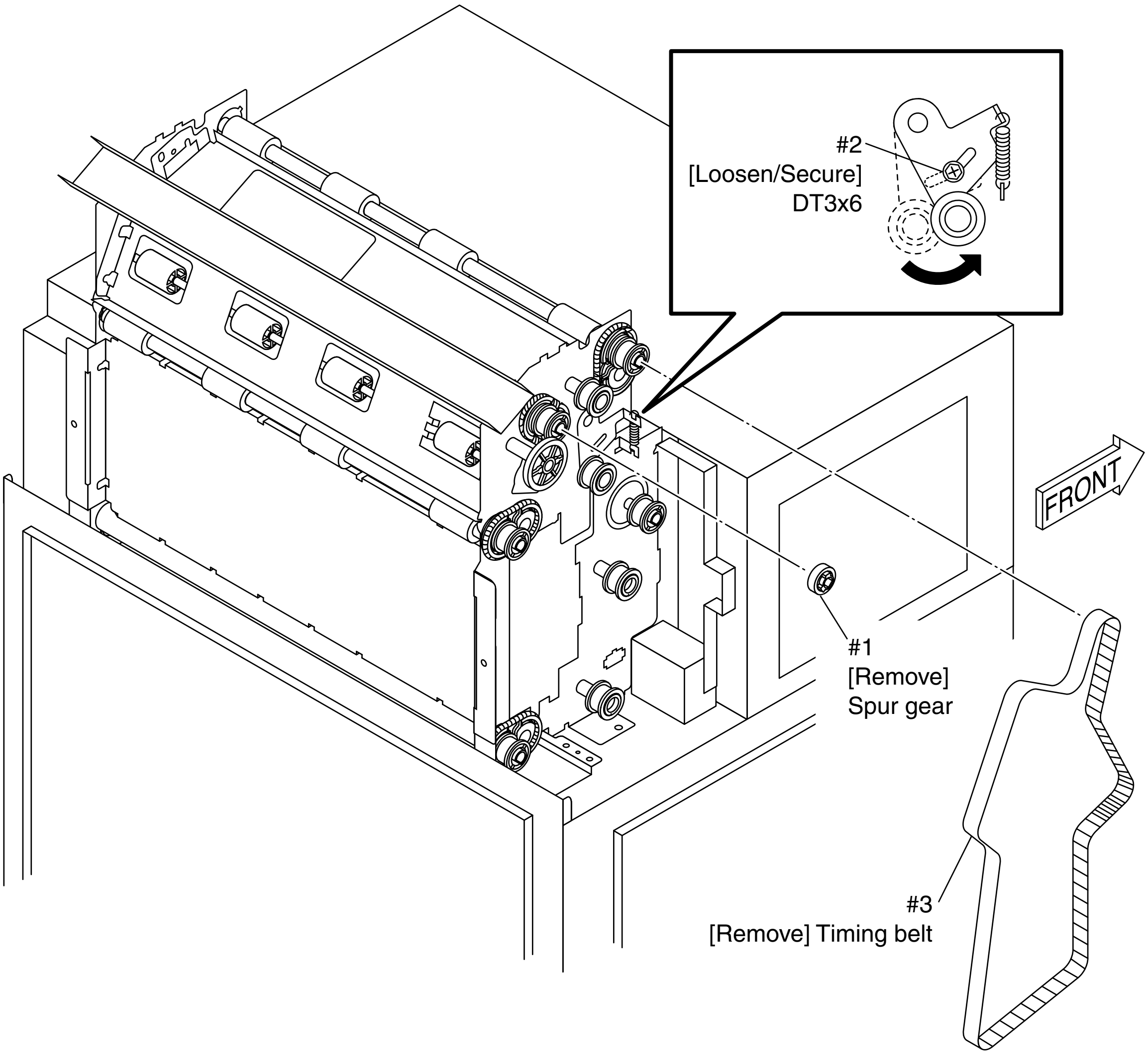
(2) Remove the lamp assembly.

☞ “6.2 Lamp Assembly”

(3) Remove the cleaning roller assembly.

☞ “6.8 Cleaning Roller Assembly”

(4) Remove the timing belt.


#2
[Loosen/Secure]
DT3x6
FRONT
#1
[Remove]
Spur gear
#3
[Remove] Timing belt

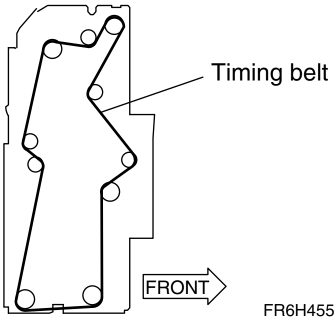
FR6H4511.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

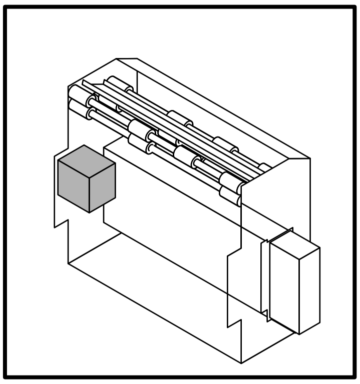
■ Check/Adjustment Procedures

- Make sure that the timing belt is mounted in its proper position.


Timing belt
FRONT

FR6H4550.EPS

6.10 Motor (MB1)



FR6H4563.EPS

■ Removal Procedures

(1) Remove the lamp assembly.

☞ “6.2 Lamp Assembly”

(2) Remove the rear cover.

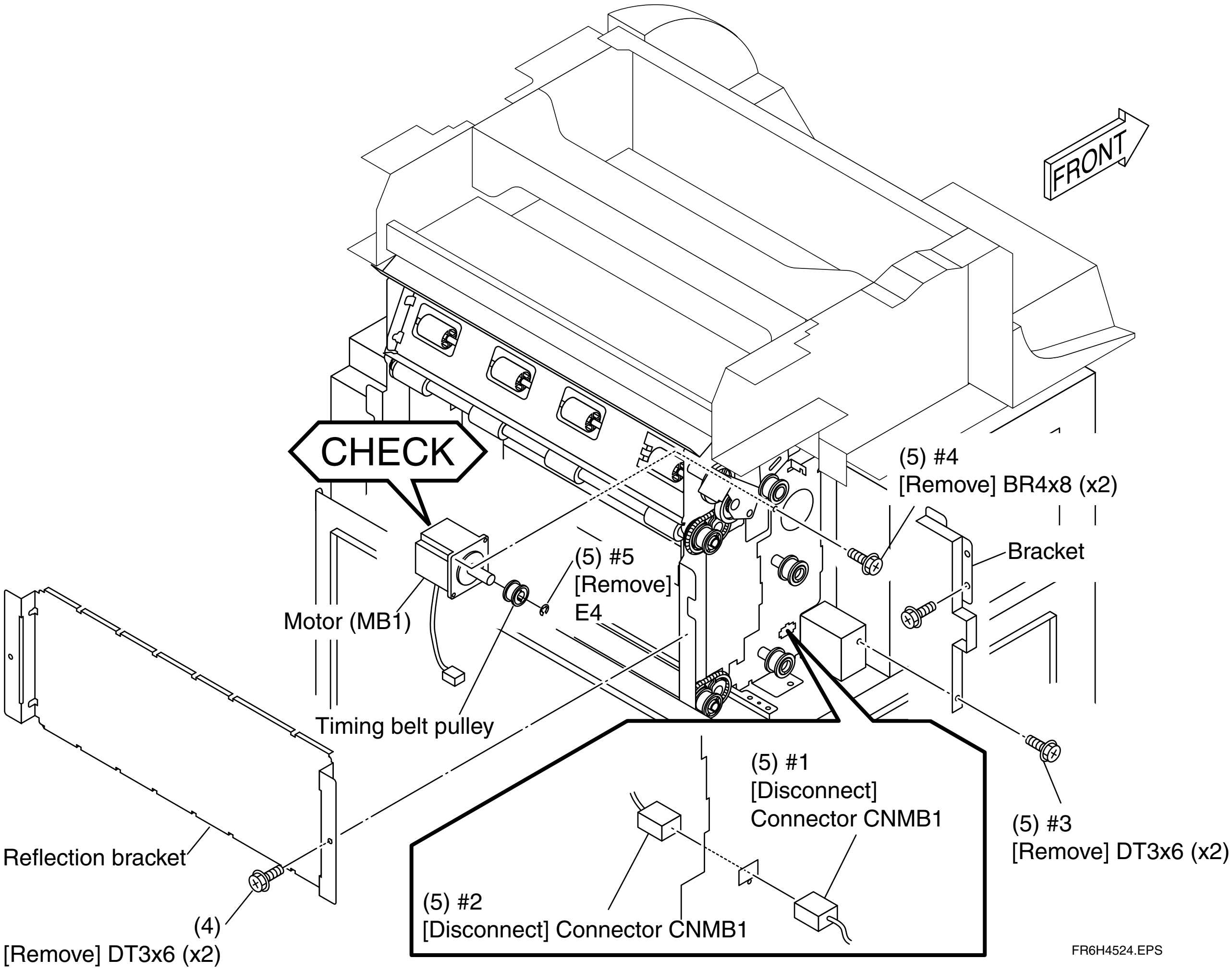
☞ “3.1 Removing and Reinstalling the Covers”

(3) Loosen the belt tension.

☞ “6.9 Timing Belt”

(4) Remove the reflection bracket.

(5) Remove the motor (MB1).

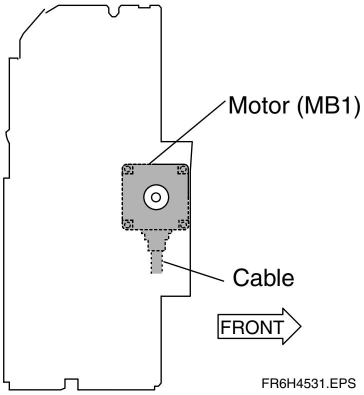

FRONT
CHECK
(5) #4
[Remove] BR4x8 (x2)
Bracket
(5) #5
[Remove]
E4
Motor (MB1)
Timing belt pulley
(5) #1
[Disconnect]
Connector CNMB1
(5) #3
[Remove] DT3x6 (x2)
Reflection bracket
(4)
[Remove] DT3x6 (x2)
(5) #2
[Disconnect] Connector CNMB1
FR6H4524.EPS

■ Reinstallation Procedures

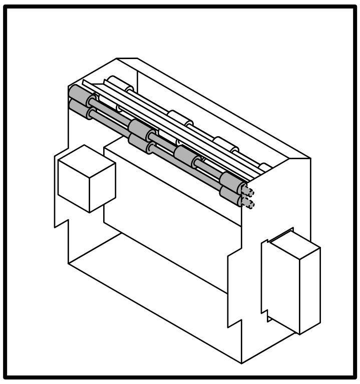
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the motor (MB1) is mounted in its proper position.

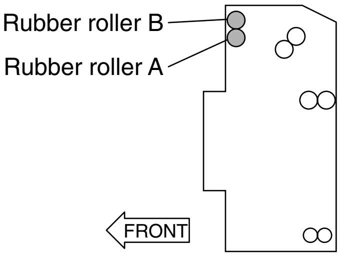

Motor (MB1)
Cable
FRONT
FR6H4531.EPS

6.11 Rubber Rollers A and B



FR6H4559.EPS

■ Rubber Roller Locations


Rubber roller B
Rubber roller A
FRONT

FR6H4542.EPS

◇ *REFERENCE* ◇

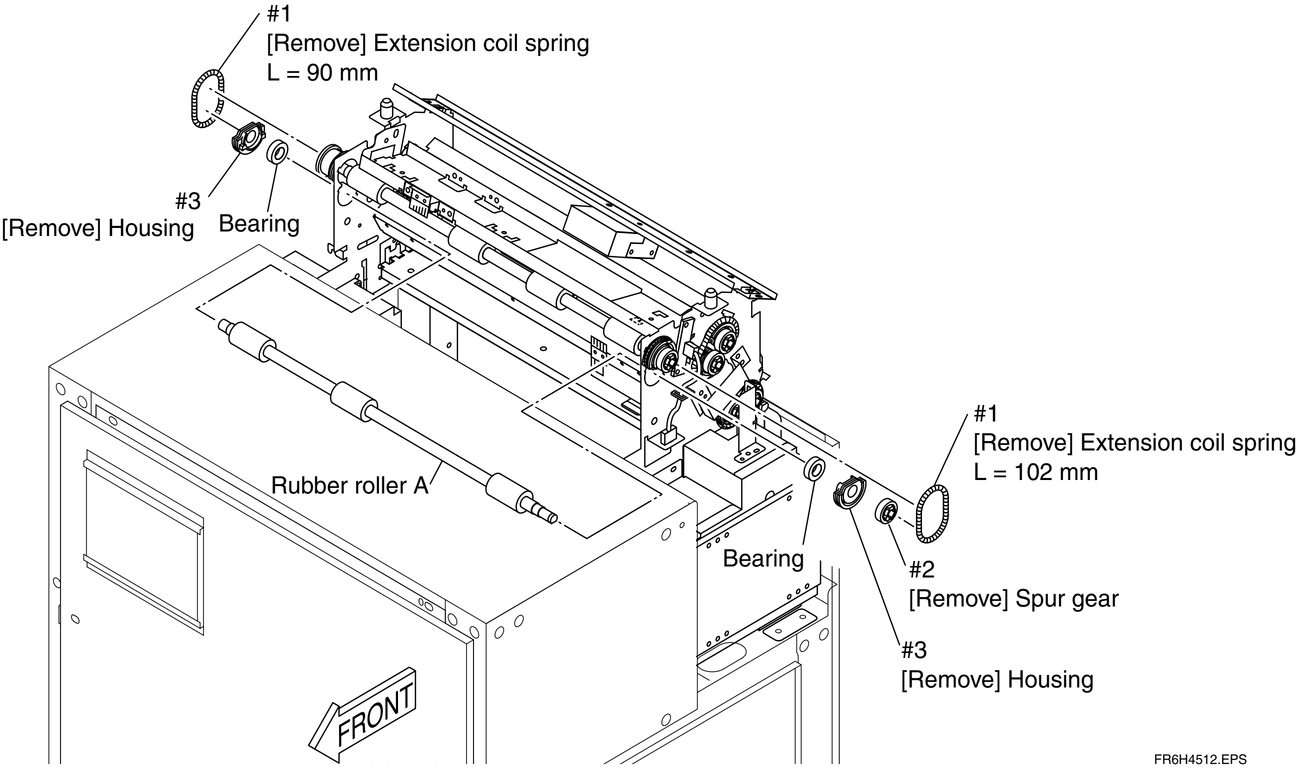
To remove the rubber roller B, the rubber roller A should be removed first.
The rubber roller B cannot be removed alone.

■ Removal Procedures

(1) Remove the timing belt.

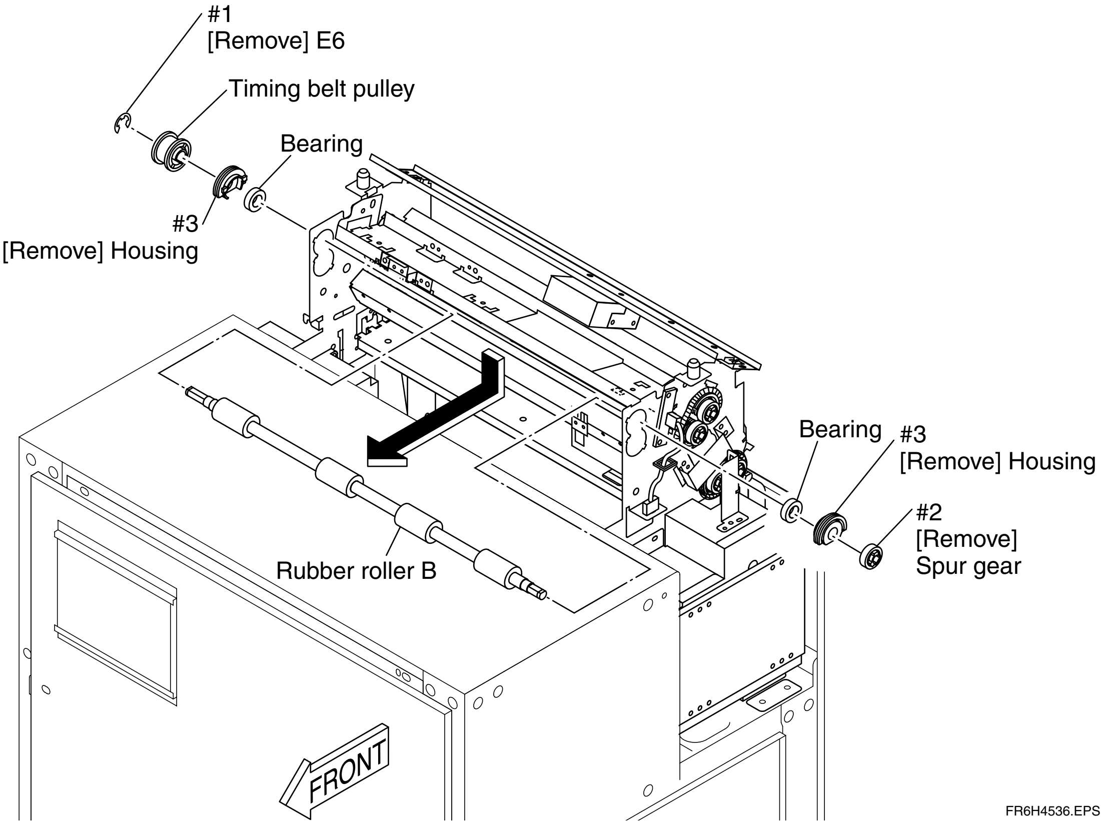
☞ “6.9 Timing Belt”

(2) Remove the rubber roller A.


#1
[Remove] Extension coil spring
L = 90 mm
#3
[Remove] Housing
Bearing
Rubber roller A
FRONT
#1
[Remove] Extension coil spring
L = 102 mm
Bearing
#2
[Remove] Spur gear
#3
[Remove] Housing

FR6H4512.EPS

(3) Remove the rubber roller B.


#1
[Remove] E6
Timing belt pulley
Bearing
#3
[Remove] Housing
Bearing
#3
[Remove] Housing
#2
[Remove]
Spur gear
Rubber roller B
FRONT
FR6H4536.EPS

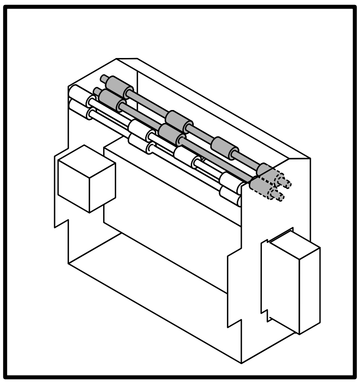
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

The extension coil springs and rubber rollers differ in size depending on where they are attached. Use care not to confuse their locations.

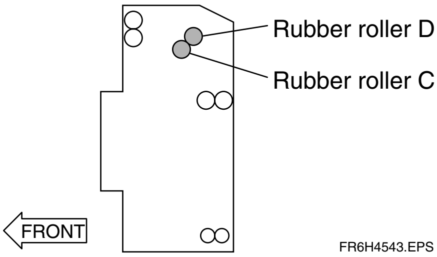
For reinstallation, reverse the removal steps.

6.12 Rubber Rollers C and D



FR6H4560.EPS

■ Rubber Roller Locations



Rubber roller D
Rubber roller C
FRONT
FR6H4543.EPS

◇ REFERENCE ◇

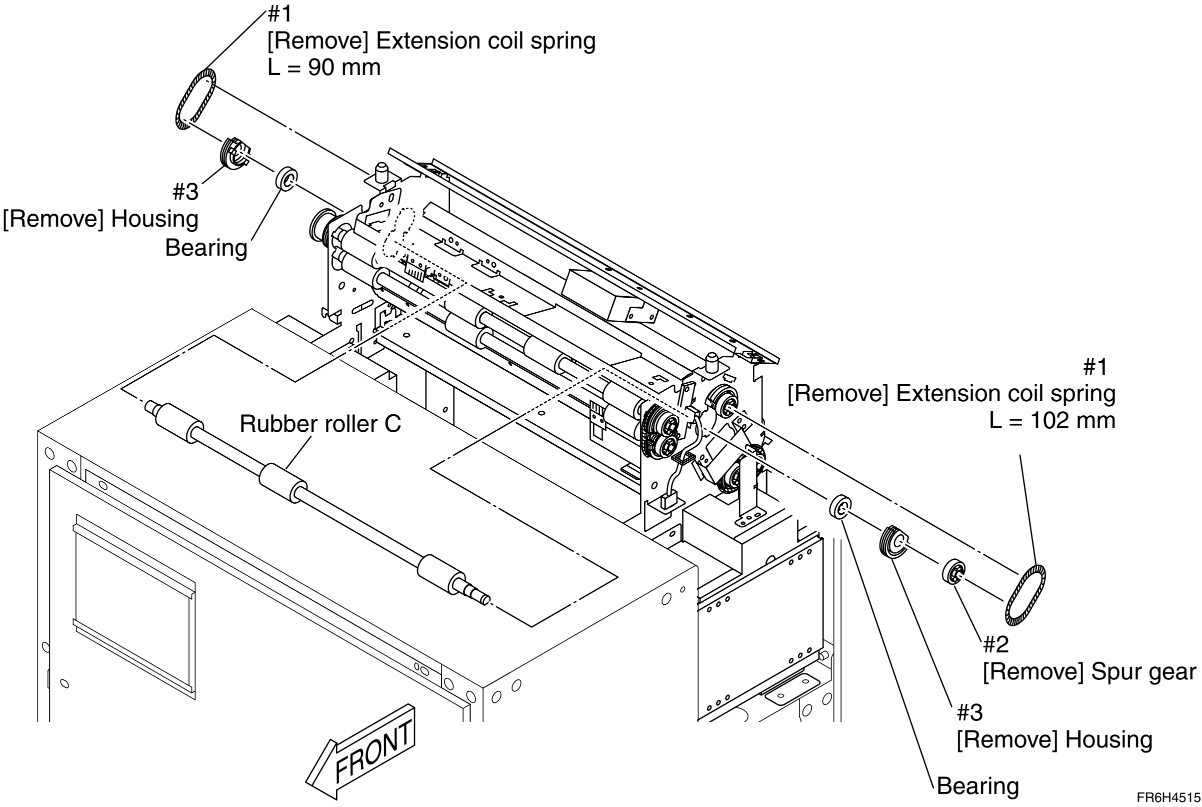
To remove the rubber roller D, the rubber roller C should be removed first.
The rubber roller D cannot be removed alone.

■ Removal Procedures

(1) Remove the timing belt.

☞ “6.9 Timing Belt”

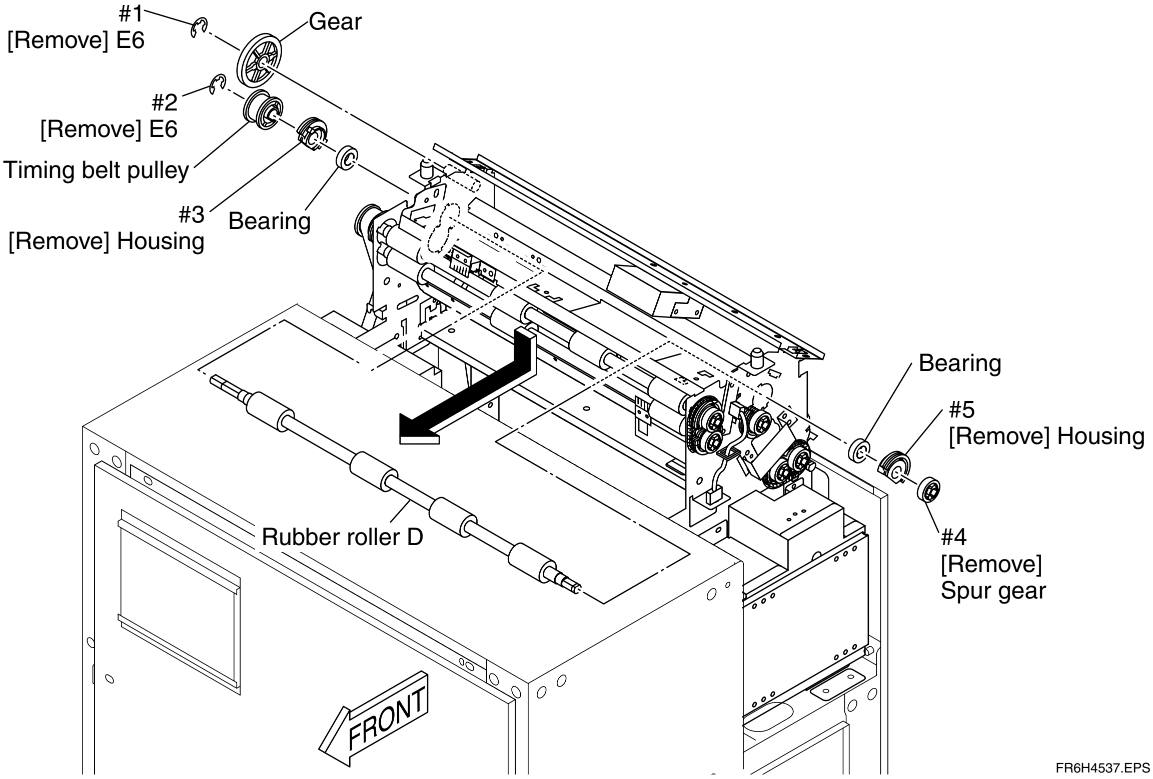
(2) Remove the rubber roller C.



#1
[Remove] Extension coil spring
L = 90 mm
#3
[Remove] Housing
Bearing
Rubber roller C
#1
[Remove] Extension coil spring
L = 102 mm
#2
[Remove] Spur gear
#3
[Remove] Housing
Bearing
FRONT

FR6H4515.EPS

(3) Remove the rubber roller D.


#1
[Remove] E6
Gear
#2
[Remove] E6
Timing belt pulley
#3
[Remove] Housing
Bearing
Bearing
#5
[Remove] Housing
#4
[Remove]
Spur gear
Rubber roller D
FRONT
FR6H4537.EPS

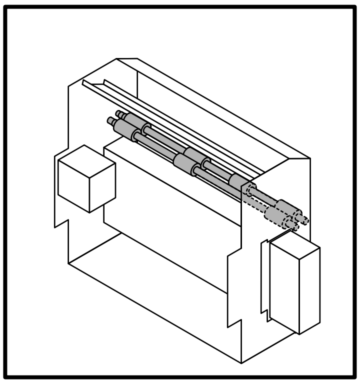
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

The extension coil springs and rubber rollers differ in size depending on where they are attached. Use care not to confuse their locations.

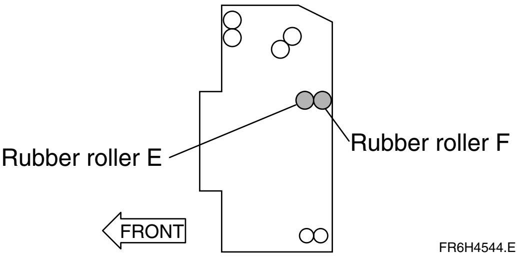
For reinstallation, reverse the removal steps.

6.13 Rubber Rollers E and F



FR6H4561.EPS

■ Rubber Roller Locations



FR6H4544.EPS

◇ *REFERENCE* ◇

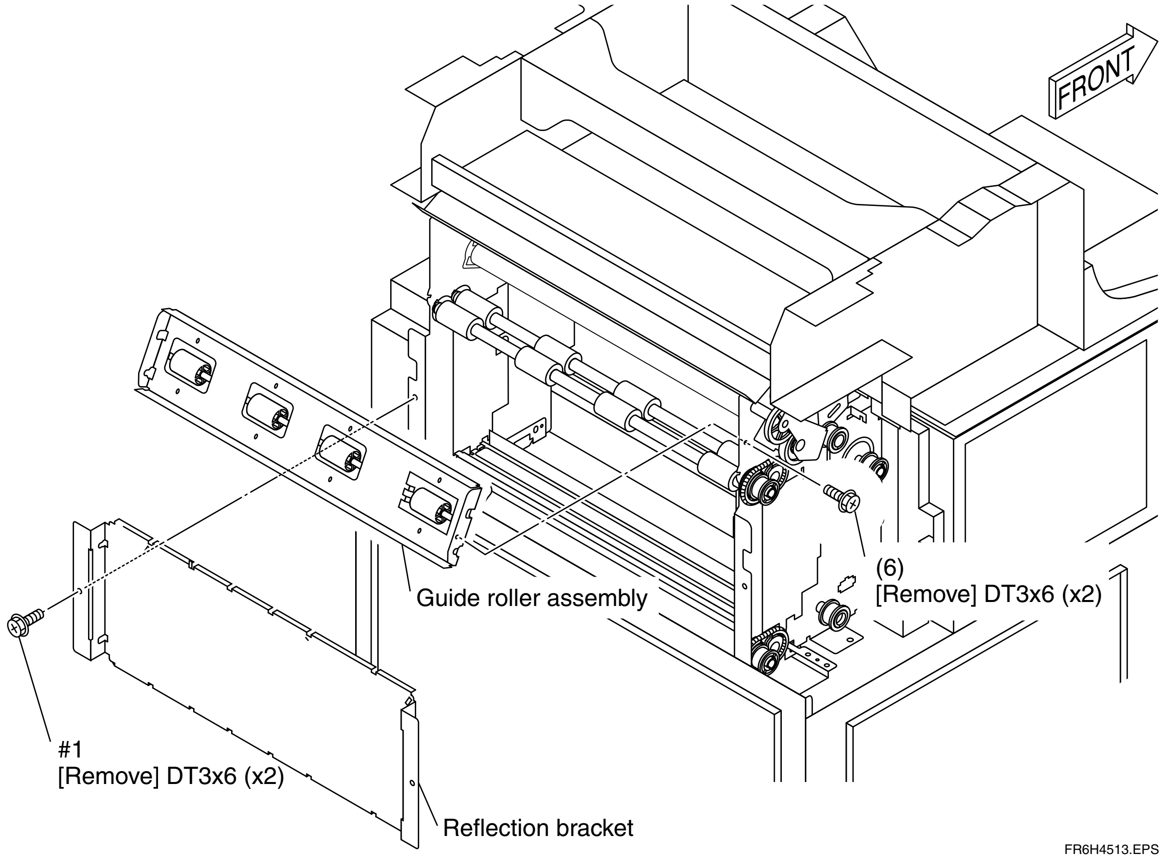
To remove the rubber roller F, the rubber roller E should be removed first.
The rubber roller F cannot be removed alone.

■ Removal Procedures

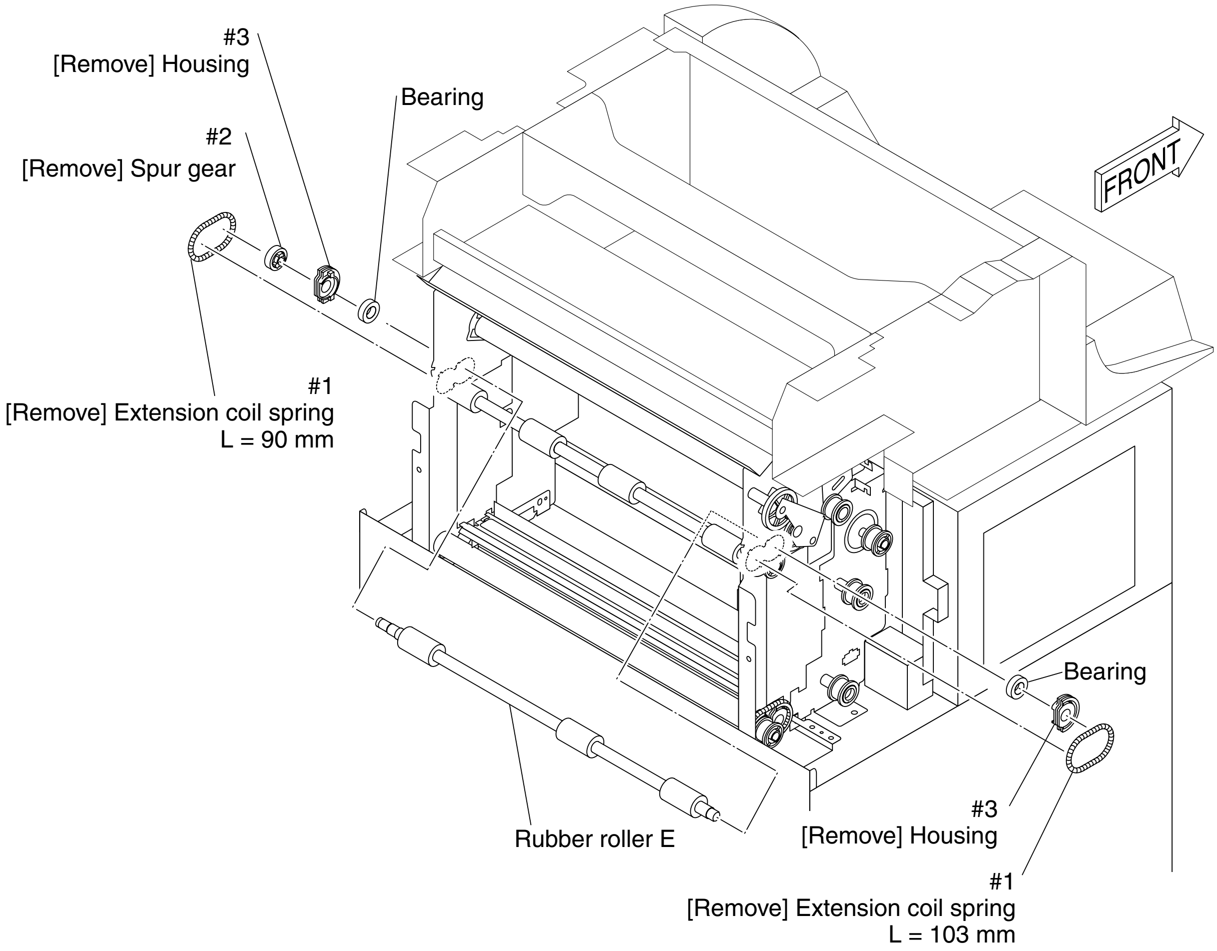
(1) Remove the lamp assembly.
☞ "6.2 Lamp Assembly"
(2) Remove the duct box.
☞ "6.7 Duct Box"
(3) Loosen the timing belt.
☞ "6.9 Timing Belt"
(4) Remove the rear cover.
☞ "3.1 Removing and Reinstalling the Covers"

(5) Remove the reflection bracket.

(6) Remove the guide roller assembly.

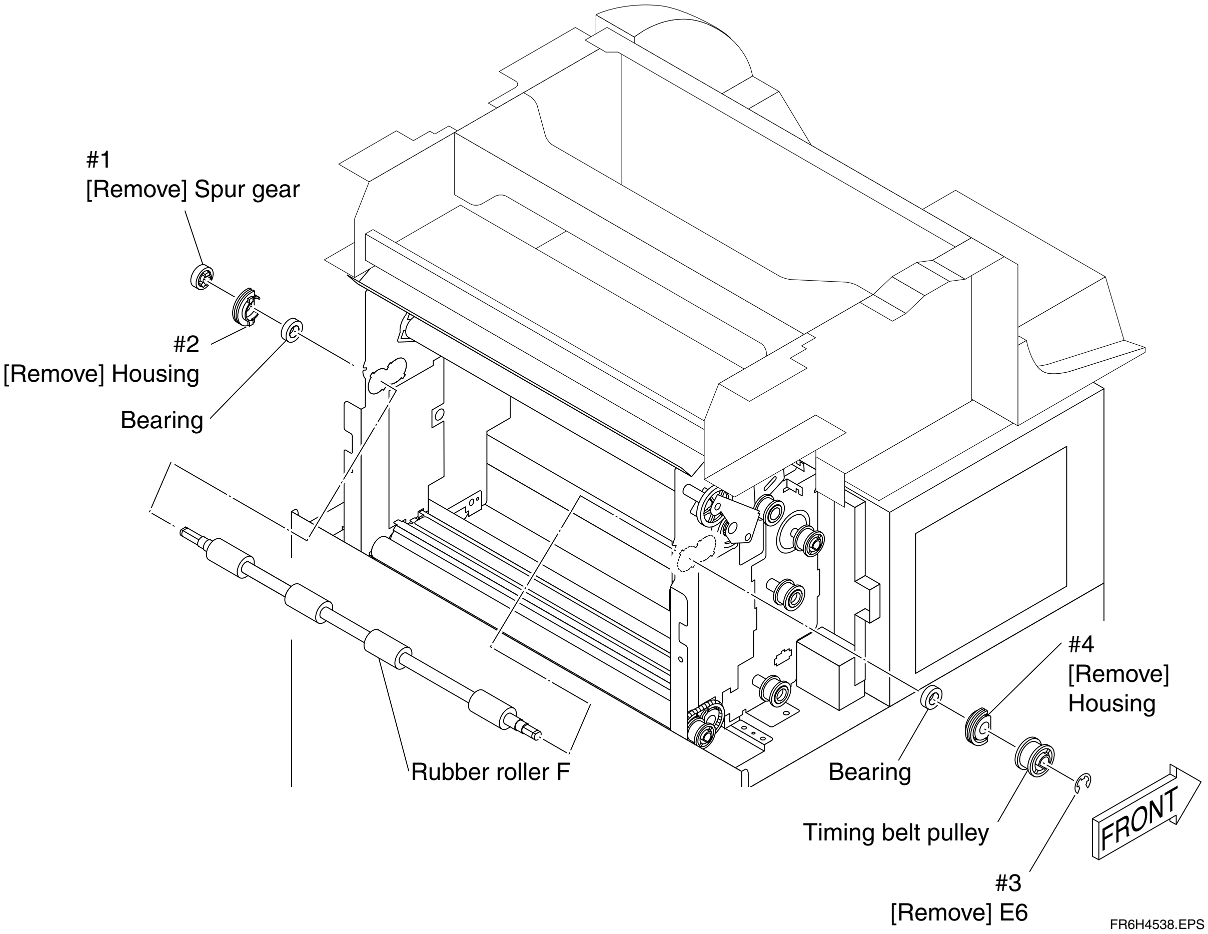

FRONT
Guide roller assembly
(6)
[Remove] DT3x6 (x2)
#1
[Remove] DT3x6 (x2)
Reflection bracket
FR6H4513.EPS

(7) Remove the rubber roller E.


#3
[Remove] Housing
Bearing
#2
[Remove] Spur gear
FRONT
#1
[Remove] Extension coil spring
L = 90 mm
Bearing
Rubber roller E
#3
[Remove] Housing
#1
[Remove] Extension coil spring
L = 103 mm

FR6H4518.EPS

(8) Remove the rubber roller F.


#1
[Remove] Spur gear
#2
[Remove] Housing
Bearing
Rubber roller F
#4
[Remove]
Housing
Bearing
Timing belt pulley
#3
[Remove] E6
FRONT
FR6H4538.EPS

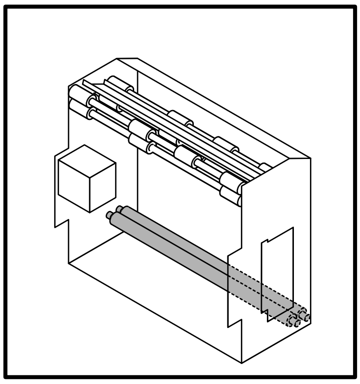
■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

◆ *INSTRUCTION* ◆

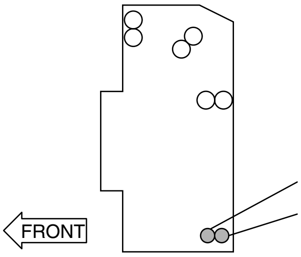
The extension coil springs and rubber rollers differ in size depending on where they are attached. Use care not to confuse their locations.

6.14 Rubber Rollers G and H



FR6H4562.EPS

■ Rubber Roller Locations



FR6H4545.EPS

◇ REFERENCE ◇

To remove the rubber roller H, the rubber roller G should be removed first.
The rubber roller H cannot be removed alone.

■ Removal Procedures

(1) Remove the lamp assembly.

☞ “6.2 Lamp Assembly”

(2) Remove the duct box.

☞ “6.7 Duct Box”

(3) Loosen the timing belt.

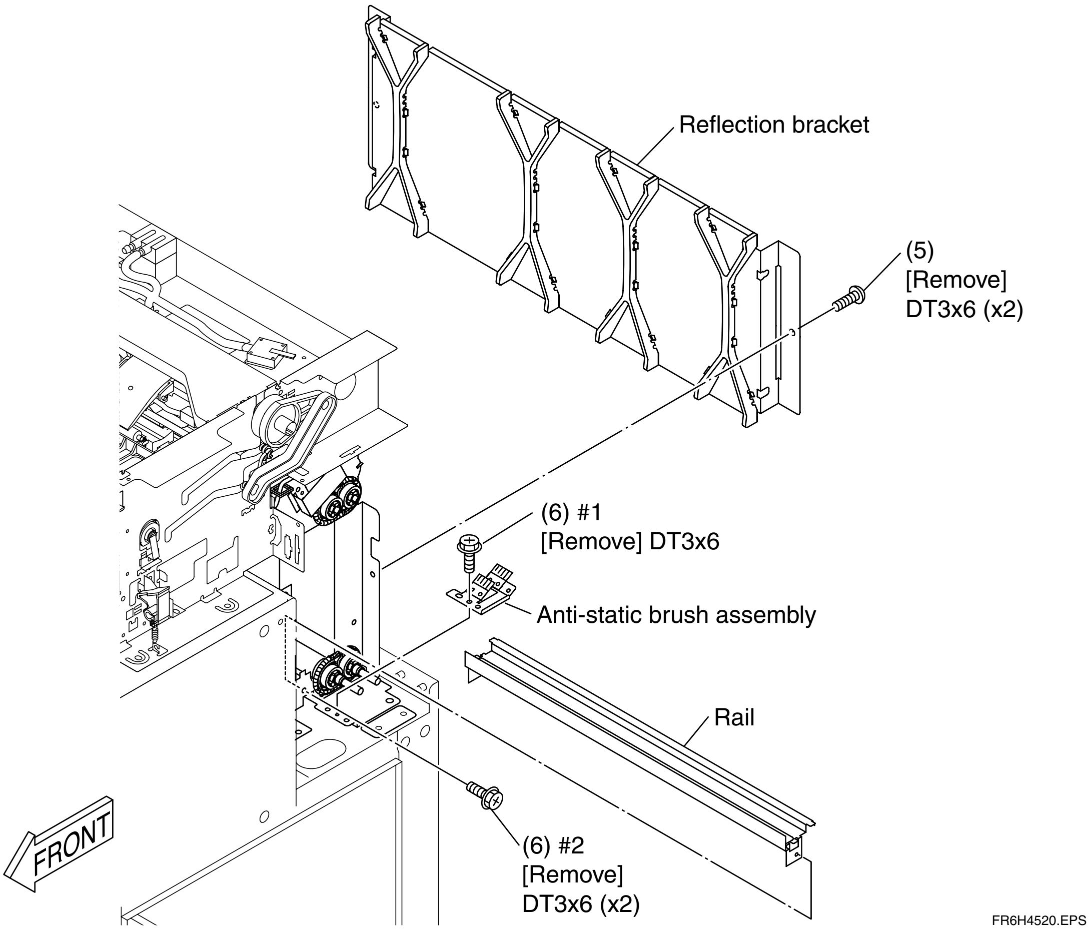
☞ “6.9 Timing Belt”

(4) Remove the rear cover.

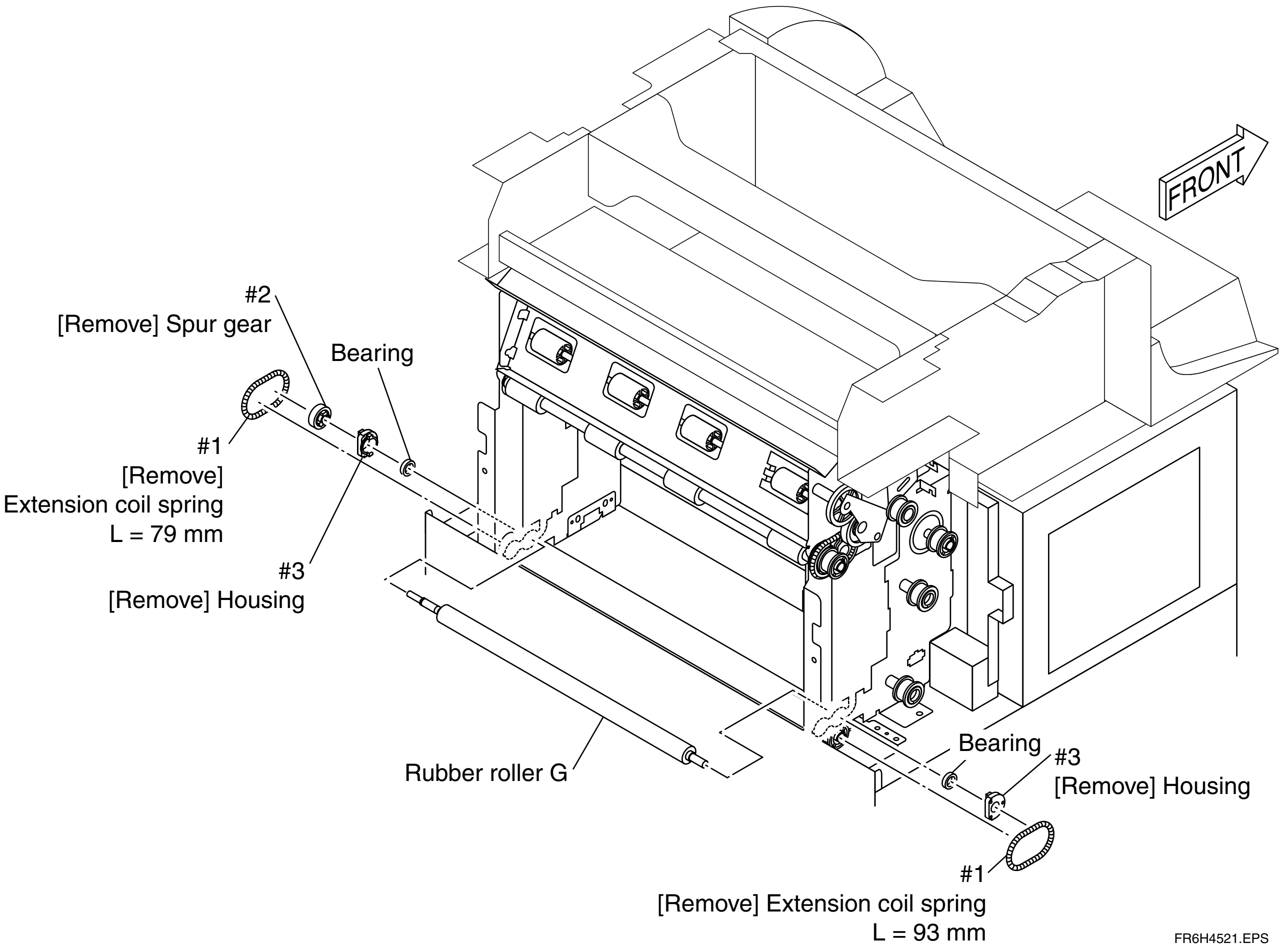
☞ “3.1 Removing and Reinstalling the Covers”

(5) Remove the reflection bracket.

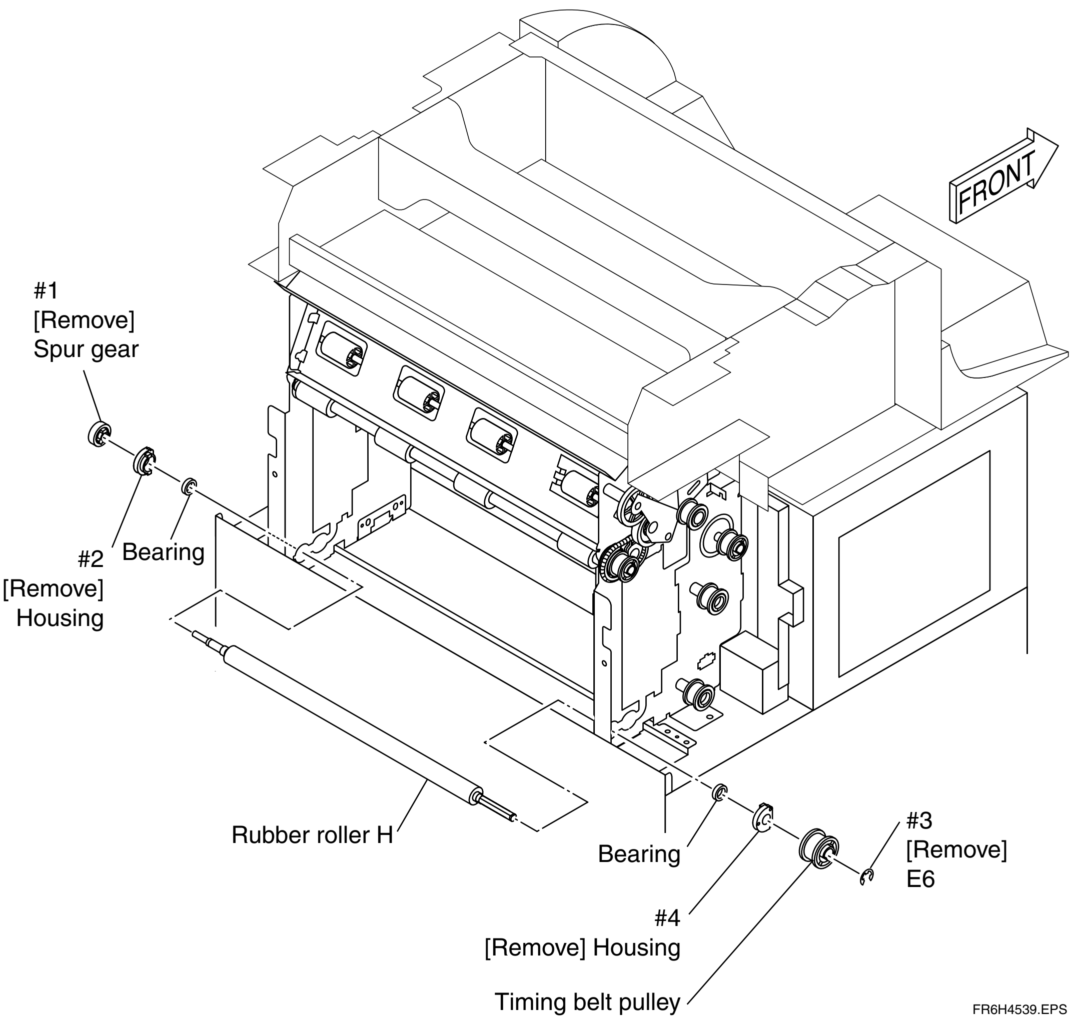
(6) Remove the rail.


Reflection bracket
(5)
[Remove]
DT3x6 (x2)
(6) #1
[Remove] DT3x6
Anti-static brush assembly
Rail
(6) #2
[Remove]
DT3x6 (x2)
FRONT
FR6H4520.EPS

(7) Remove the rubber roller G.


FRONT
#2
[Remove] Spur gear
Bearing
#1
[Remove]
Extension coil spring
L = 79 mm
#3
[Remove] Housing
Rubber roller G
Bearing
#3
[Remove] Housing
#1
[Remove] Extension coil spring
L = 93 mm
FR6H4521.EPS

(8) Remove the rubber roller H.


FRONT
#1
[Remove]
Spur gear
#2
[Remove]
Housing
Bearing
Rubber roller H
Bearing
#3
[Remove]
E6
#4
[Remove] Housing
Timing belt pulley
FR6H4539.EPS

■ Reinstallation Procedures

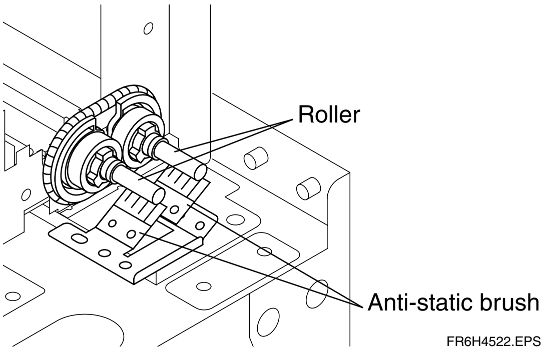
For reinstallation, reverse the removal steps.

◆ *INSTRUCTION* ◆

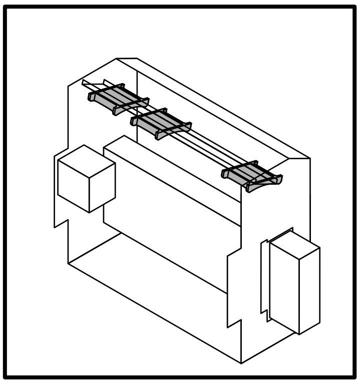
The extension coil springs and rubber rollers differ in size depending on where they are attached. Use care not to confuse their locations.

■ Check/Adjustment Procedures

- Make sure that the anti-static brush is brought into contact with the roller.

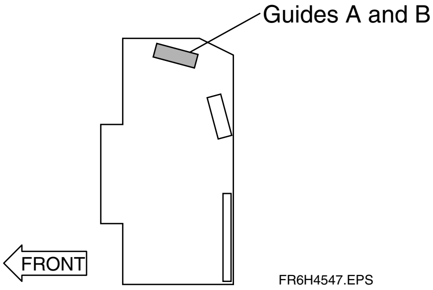

Roller
Anti-static brush
FR6H4522.EPS

6.15 Guides A and B



FR6H4564.EPS

■ Guide Locations


Guides A and B
FRONT

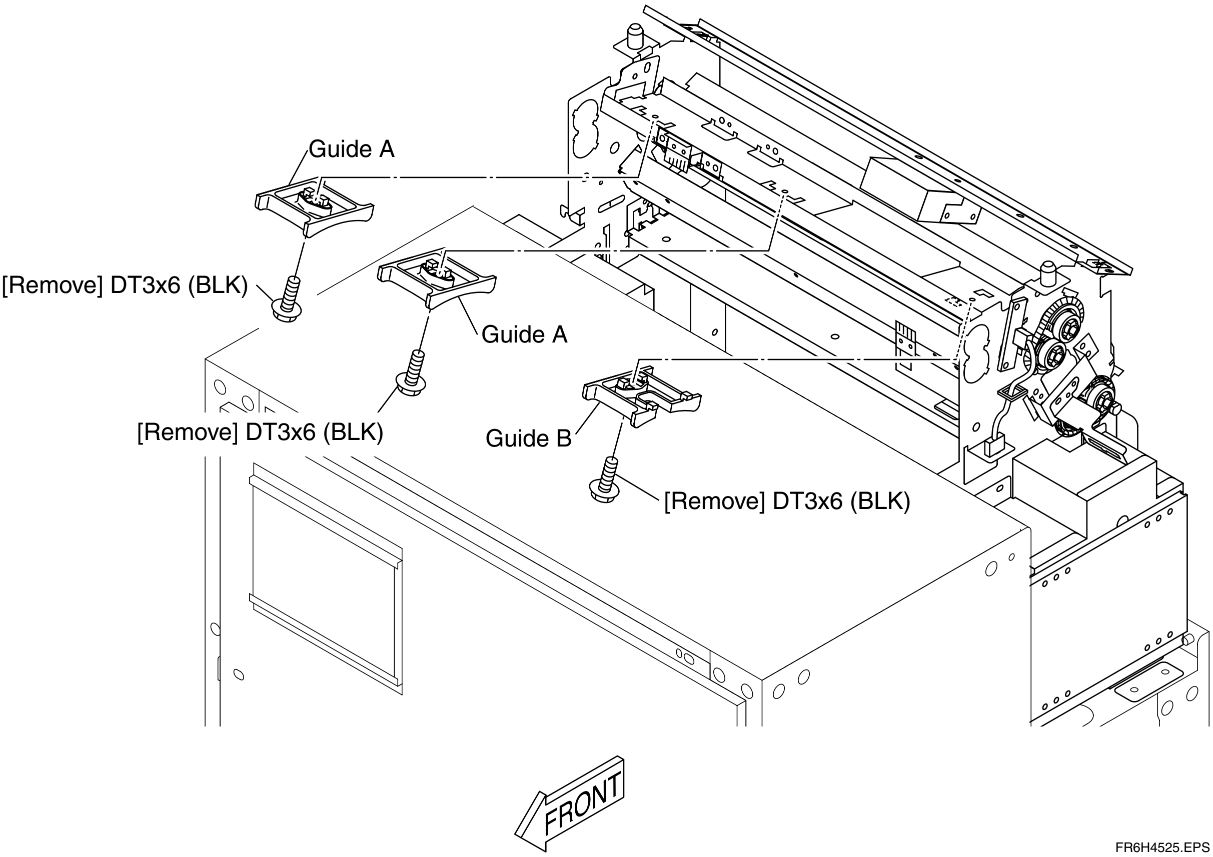
FR6H4547.EPS

■ Removal Procedures

(1) Remove the rubber rollers A and B.

☞ "6.11 Rubber Rollers A and B"

(2) Remove the guides A and B.


Guide A
[Remove] DT3x6 (BLK)
Guide A
[Remove] DT3x6 (BLK)
Guide B
[Remove] DT3x6 (BLK)
FRONT

FR6H4525.EPS

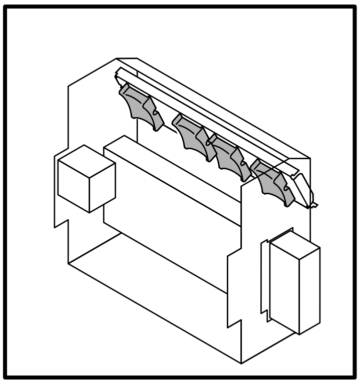
■ Reinstallation Procedures

◆ ***NOTE*** ◆

The guides A and B differ in shape.
When attaching them, use care not to confuse their locations.

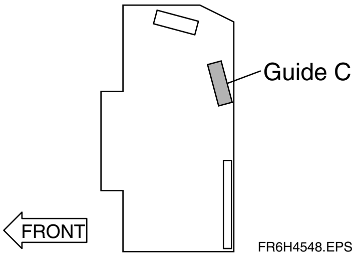
For reinstallation, reverse the removal steps.

6.16 Guide C



FR6H4565.EPS

■ Guide Locations



Guide C
FRONT
FR6H4548.EPS

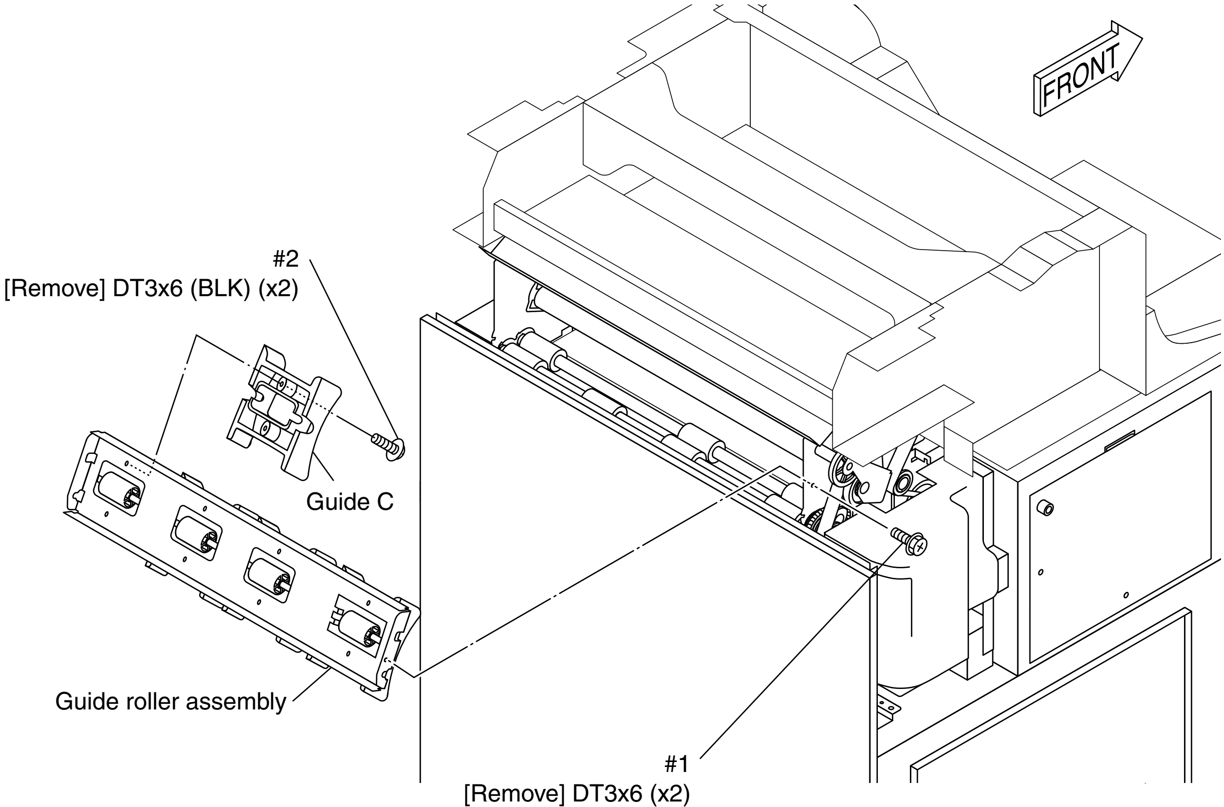
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the guide C.



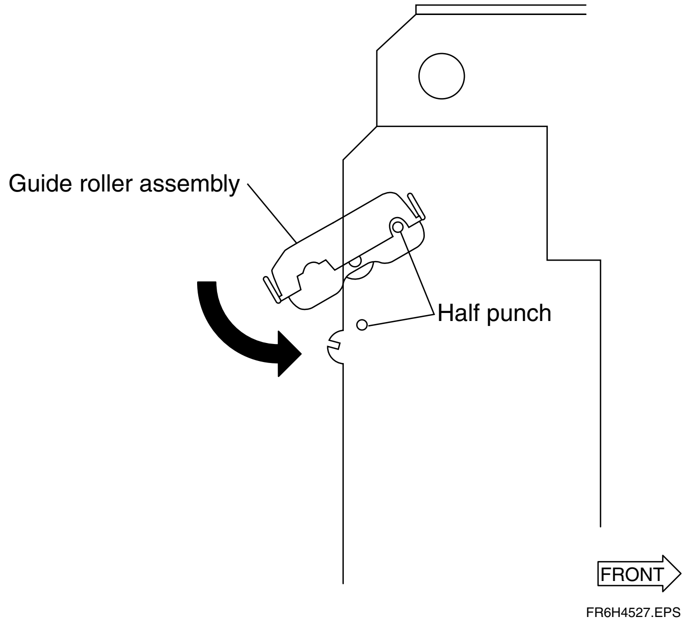
FRONT
#2
[Remove] DT3x6 (BLK) (x2)
Guide C
Guide roller assembly
#1
[Remove] DT3x6 (x2)

FR6H4526.EPS

■ Reinstallation Procedures

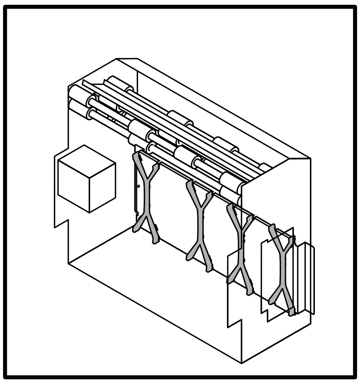
◆ ***NOTE*** ◆

The guide roller assembly should be installed as illustrated below.


Guide roller assembly
Half punch
FRONT
FR6H4527.EPS

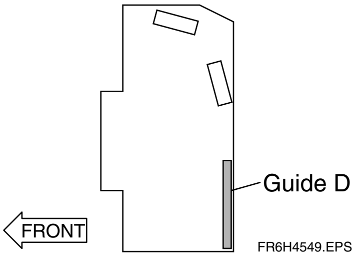
For reinstallation, reverse the removal steps.

6.17 Guide D



FR6H4566.EPS

■ Guide Locations


Guide D
FRONT
FR6H4549.EPS

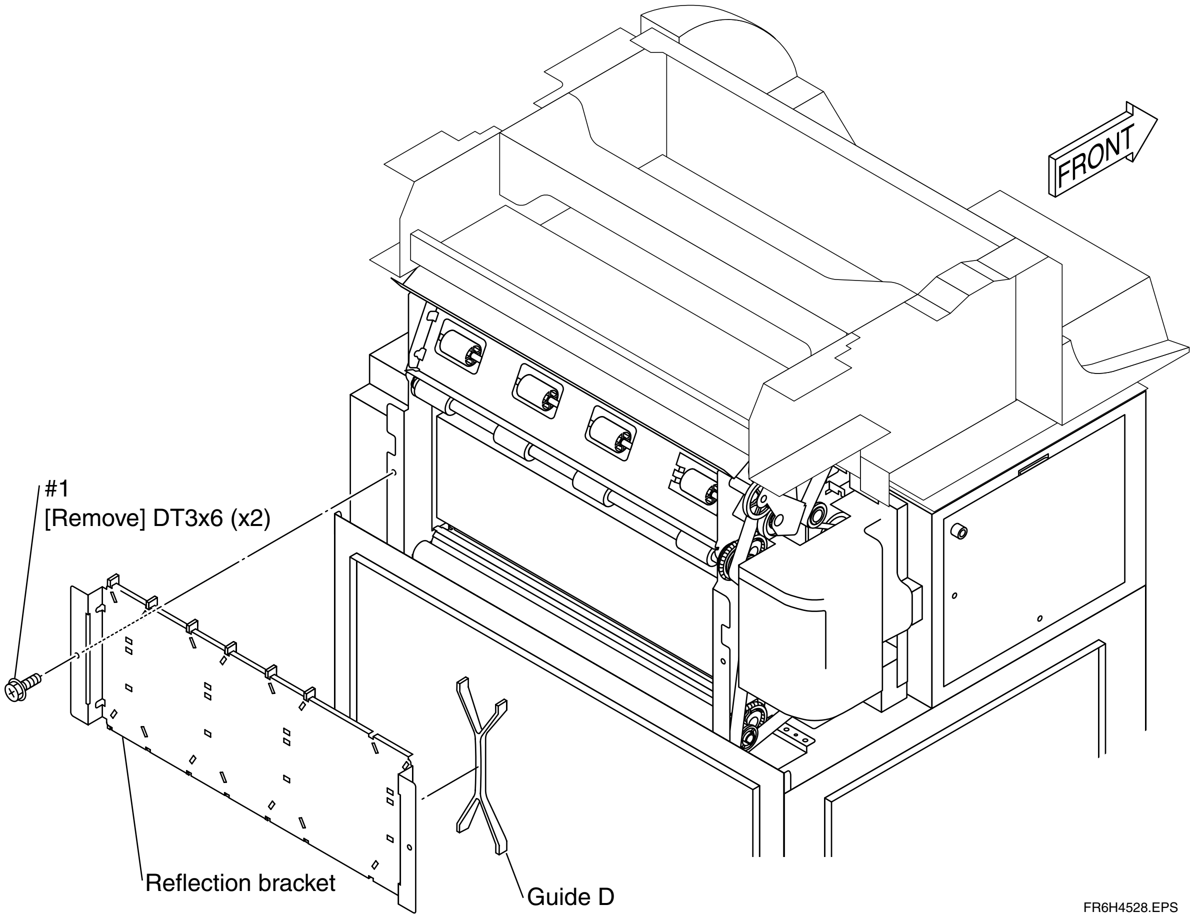
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Right- and left-hand side covers
- Top cover
- Rear cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the guide D.


#1
[Remove] DT3x6 (x2)
FRONT
Reflection bracket
Guide D

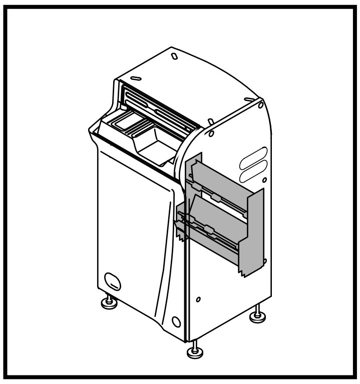
FR6H4528.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

7. Removing and Reinstalling the Side-Positioning Conveyor

7.1 Side-Positioning Conveyor



FR6H4651.EPS

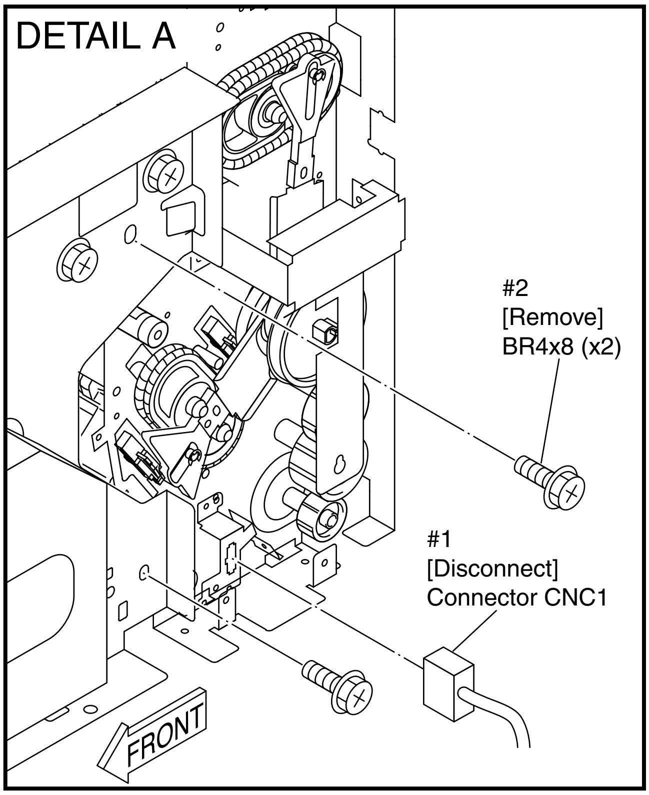
■ Removal Procedures

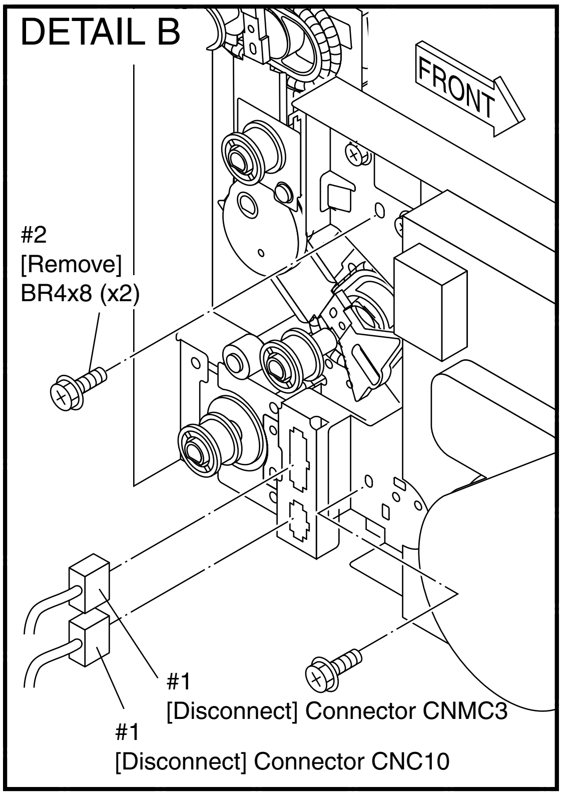
(1) Remove the covers.

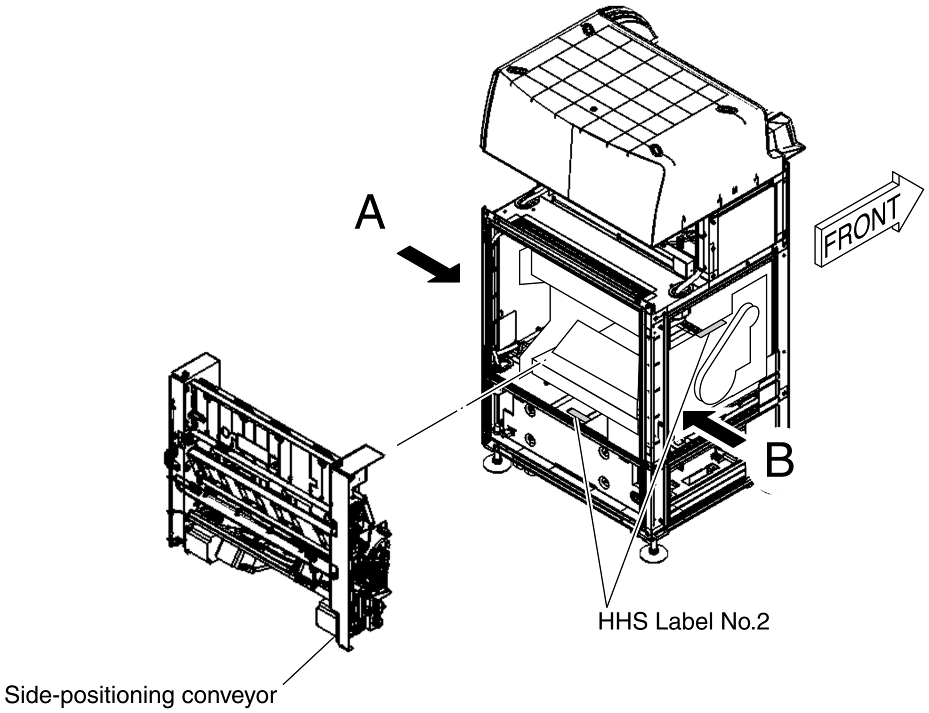
- Front cover
- Right-hand side cover
- Left-hand side cover
- Rear cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the side-positioning conveyor.


DETAIL A
#2
[Remove]
BR4x8 (x2)
#1
[Disconnect]
Connector CNC1
FRONT


DETAIL B
FRONT
#2
[Remove]
BR4x8 (x2)
#1
[Disconnect] Connector CNMC3
#1
[Disconnect] Connector CNC10

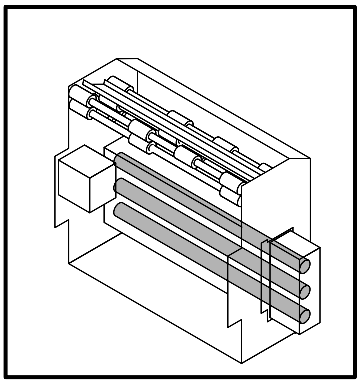

A
FRONT
B
HHS Label No.2
Side-positioning conveyor

FR6H4601.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

7.2 Timing Belt



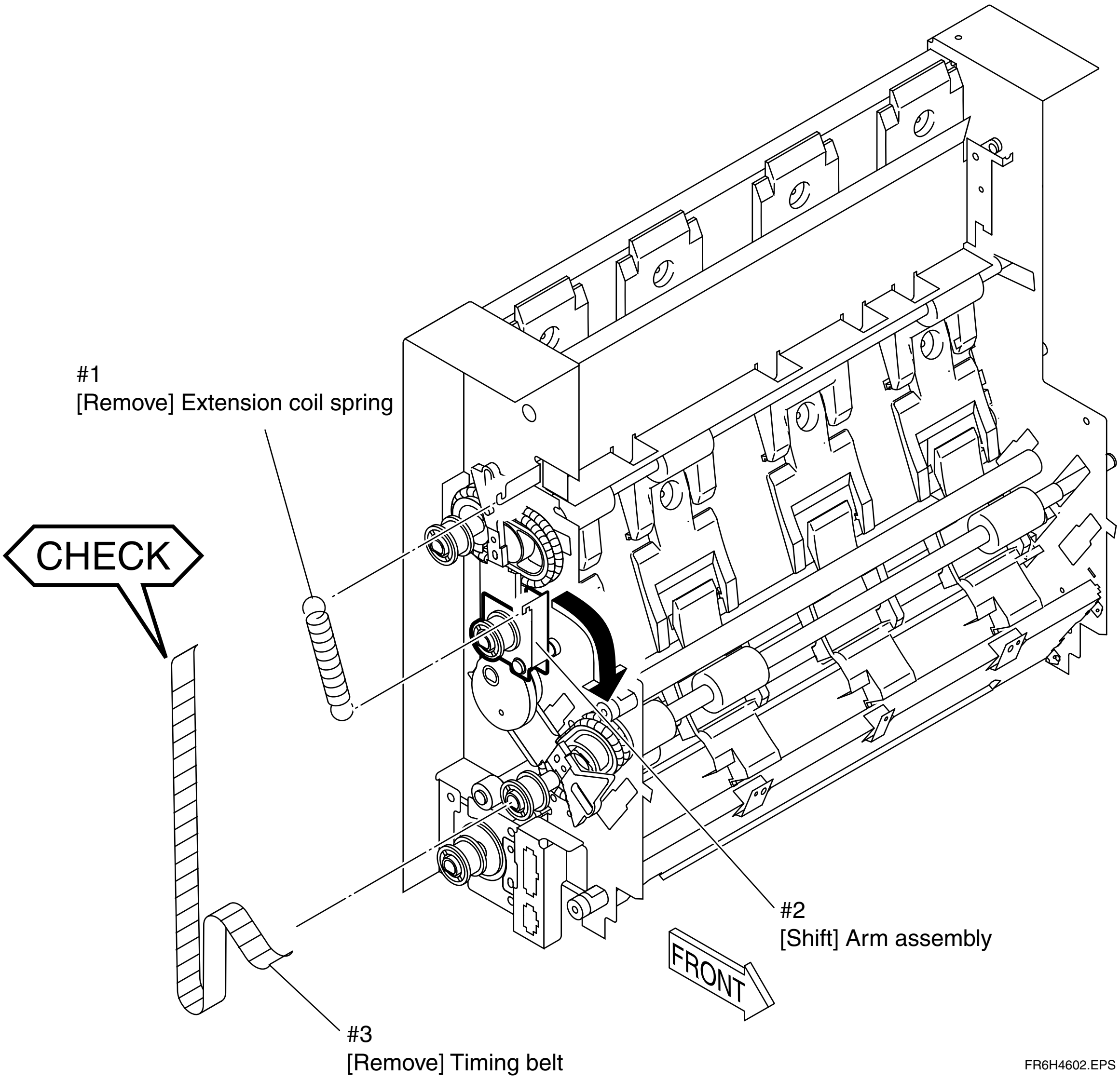
FR6H4552.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

☞ “7.1 Side-Positioning Conveyor”

(2) Remove the timing belt.


#1
[Remove] Extension coil spring
CHECK
#2
[Shift] Arm assembly
FRONT
#3
[Remove] Timing belt

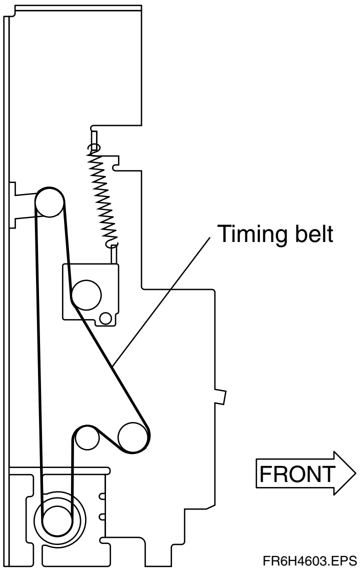
FR6H4602.EPS

■ Reinstallation Procedures

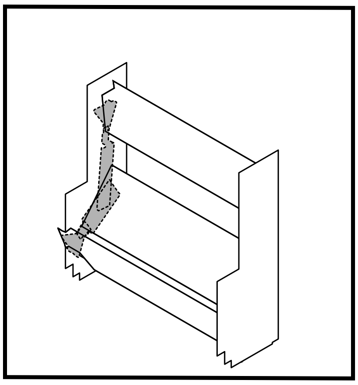
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Check the mounting position of the timing belt.

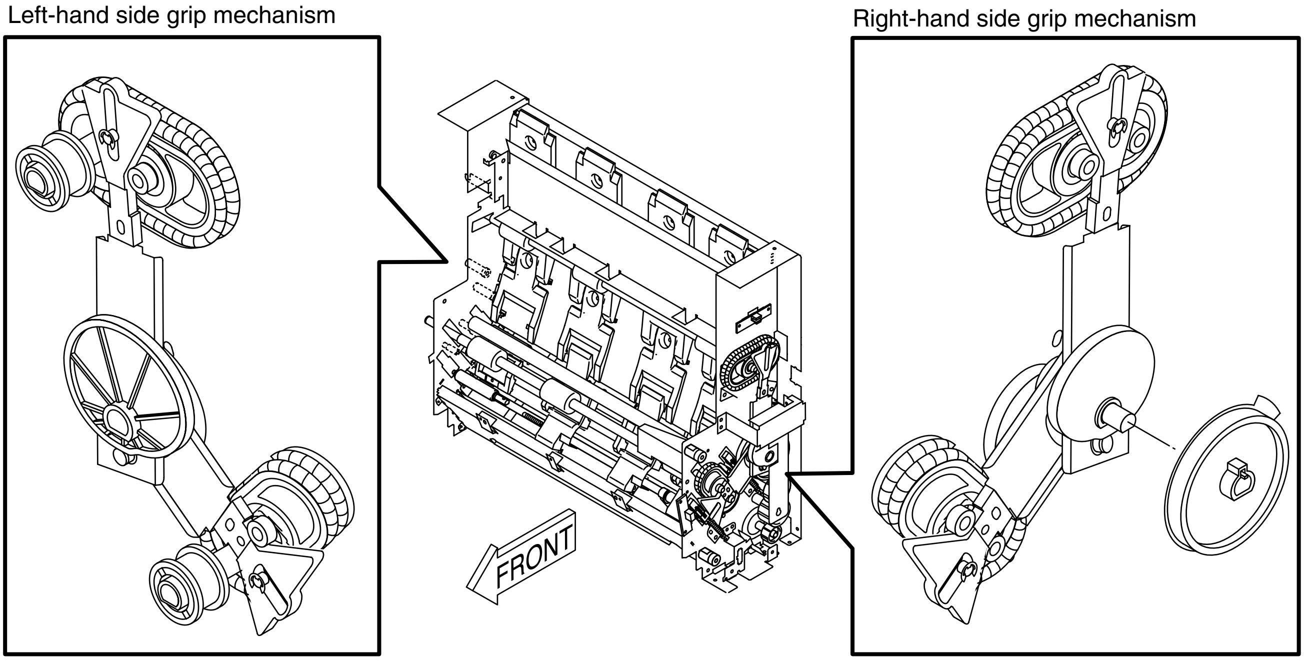

Timing belt
FRONT
FR6H4603.EPS

7.3 Grip Mechanism (Left-Hand Side)



FR6H4653.EPS

■ Grip Mechanism Locations

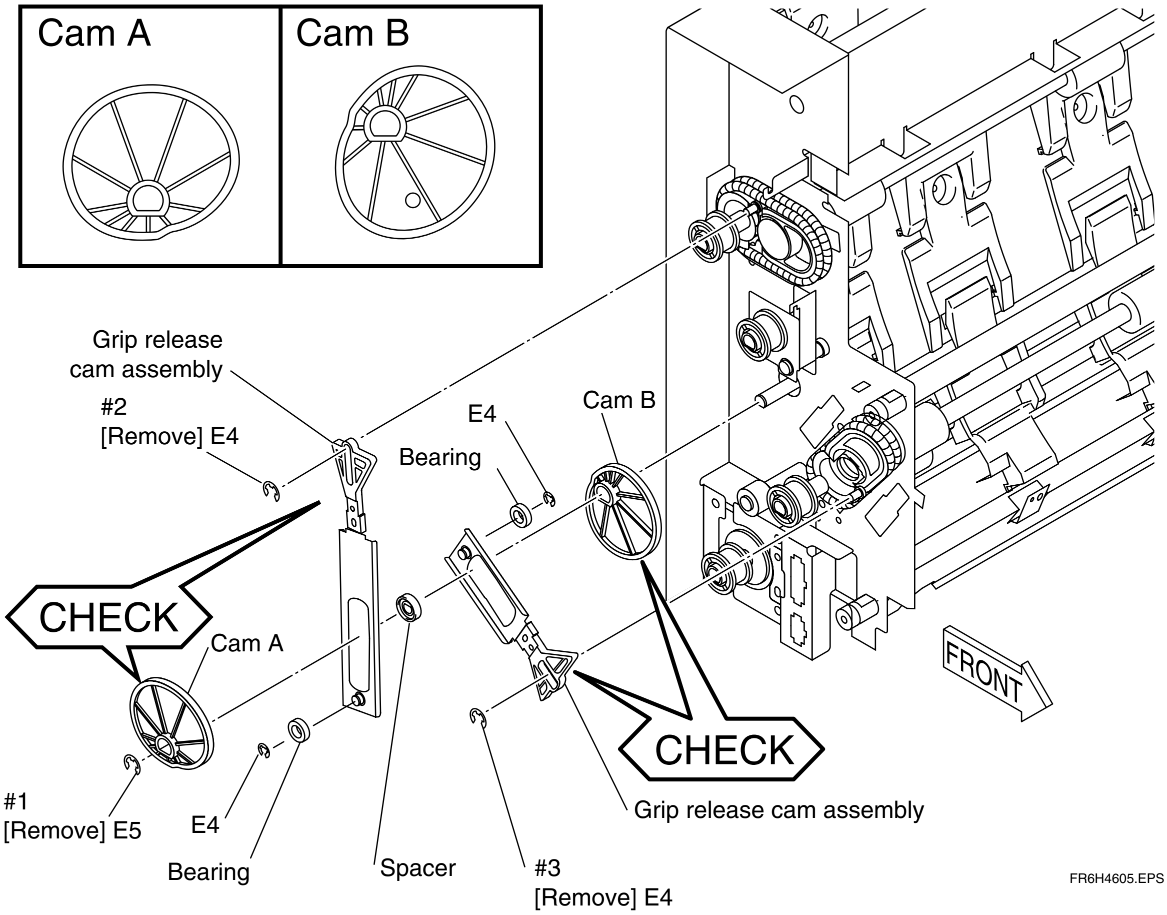

Left-hand side grip mechanism
Right-hand side grip mechanism
FRONT

FR6H4604.EPS

■ Removal Procedures

(1) Remove the timing belt.
☞ “7.2 Timing Belt”

(2) Remove the grip release cam assembly.


Cam A
Cam B
Grip release cam assembly
#2
[Remove] E4
E4
Cam B
Bearing
CHECK
Cam A
CHECK
#1
[Remove] E5
E4
Bearing
Spacer
#3
[Remove] E4
Grip release cam assembly
FRONT

FR6H4605.EPS

■ Reinstallation Procedures

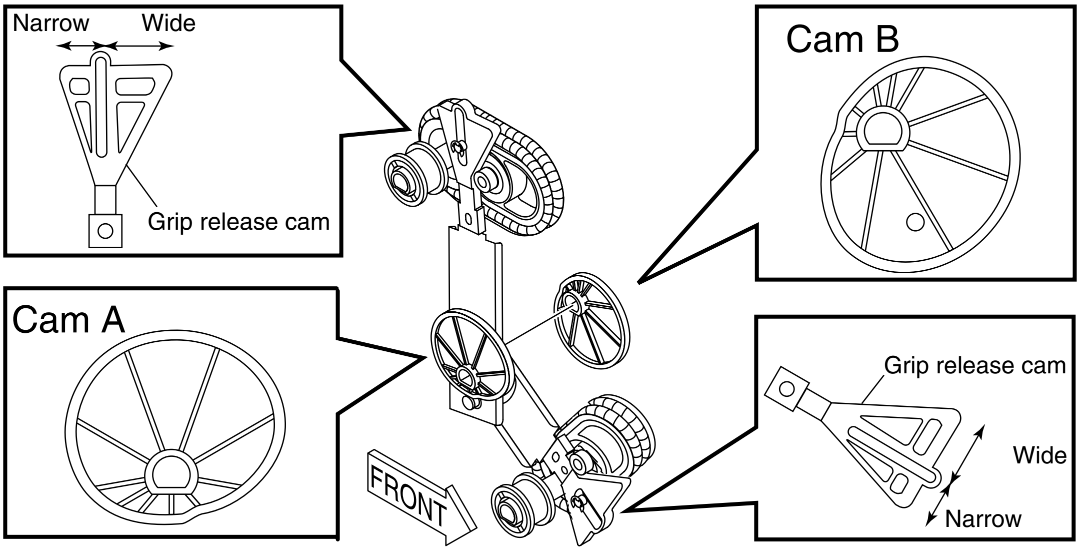
◆ *INSTRUCTION* ◆

The cams differ in shape depending on where they are attached. When attaching the cams, use care not to confuse their locations.

For reinstallation, reverse the removal steps.

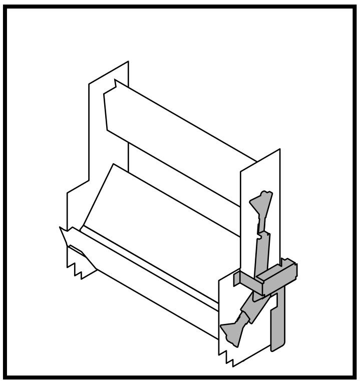
■ Check/Adjustment Procedures

- Make sure that the cams are attached correctly.


Narrow
Wide
Grip release cam
Cam B
Cam A
Grip release cam
Wide
Narrow
FRONT

FR6H4606.EPS

7.4 Grip Mechanism (Right-Hand Side)



FR6H4654.EPS

■ Grip Mechanism Locations

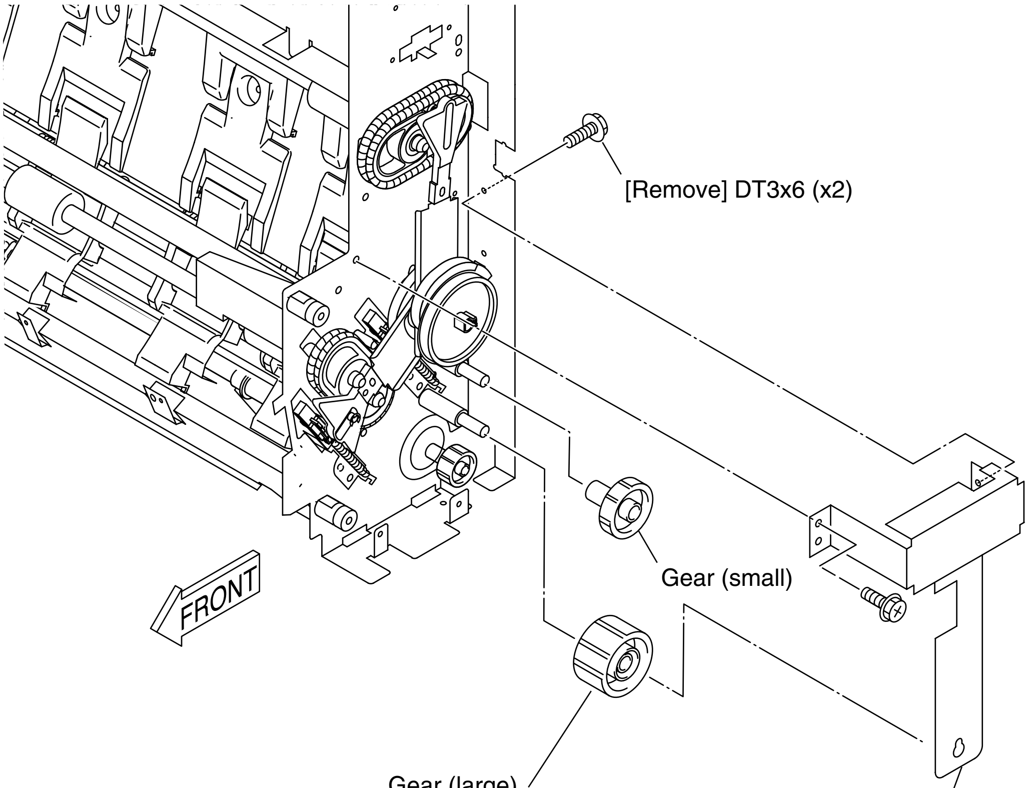
☞ “7.3 Grip Mechanism (Left-Hand Side)”

■ Removal Procedures

(1) Remove the side-positioning conveyor.

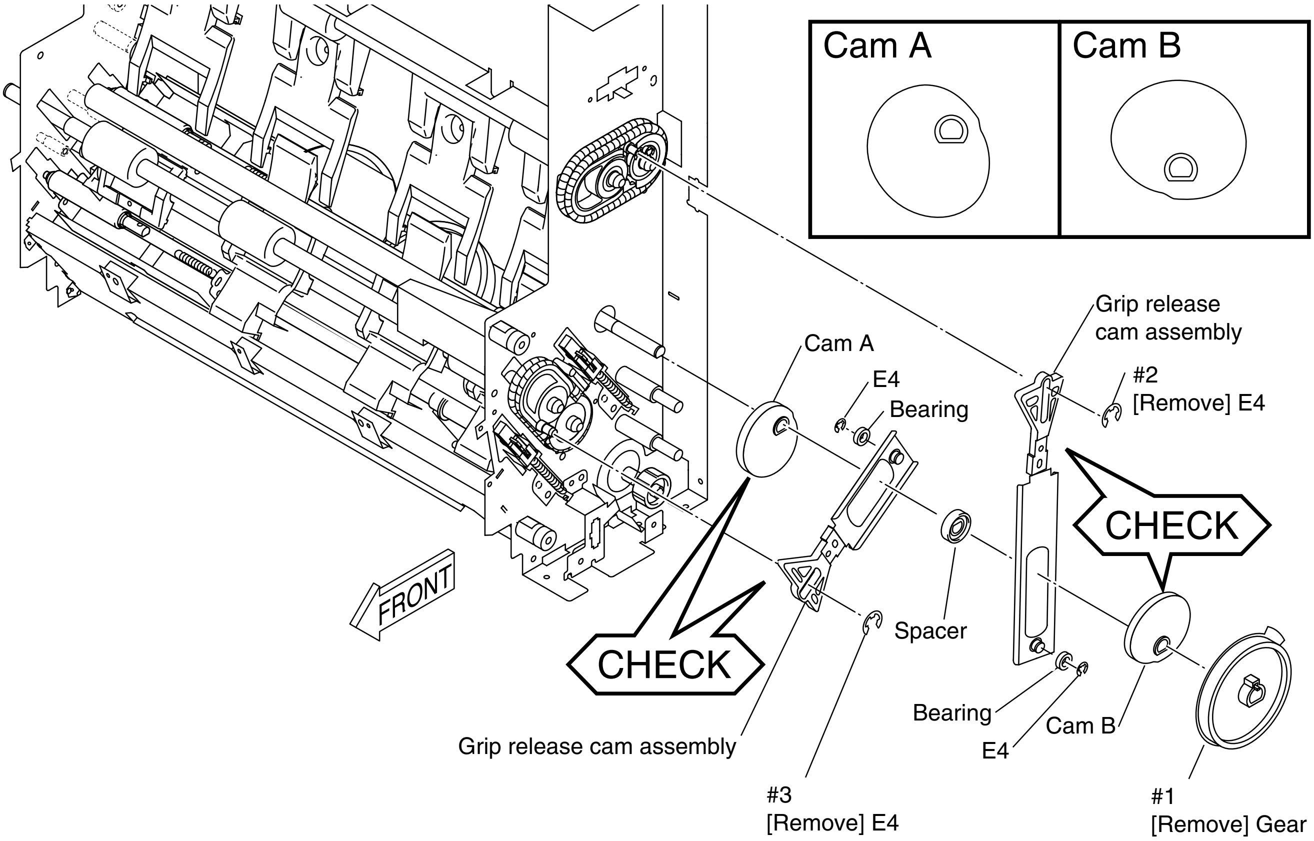
☞ “7.1 Side-Positioning Conveyor”

(2) Remove the bracket.


[Remove] DT3x6 (x2)
FRONT
Gear (small)
Gear (large)
Bracket

FR6H4607.EPS

(3) Remove the grip release cam assembly.


Cam A
Cam B
Grip release cam assembly
Cam A
E4
Bearing
#2
[Remove] E4
CHECK
CHECK
FRONT
Spacer
Bearing
E4
Cam B
Grip release cam assembly
#3
[Remove] E4
#1
[Remove] Gear

FR6H4608.EPS

■ Reinstallation Procedures

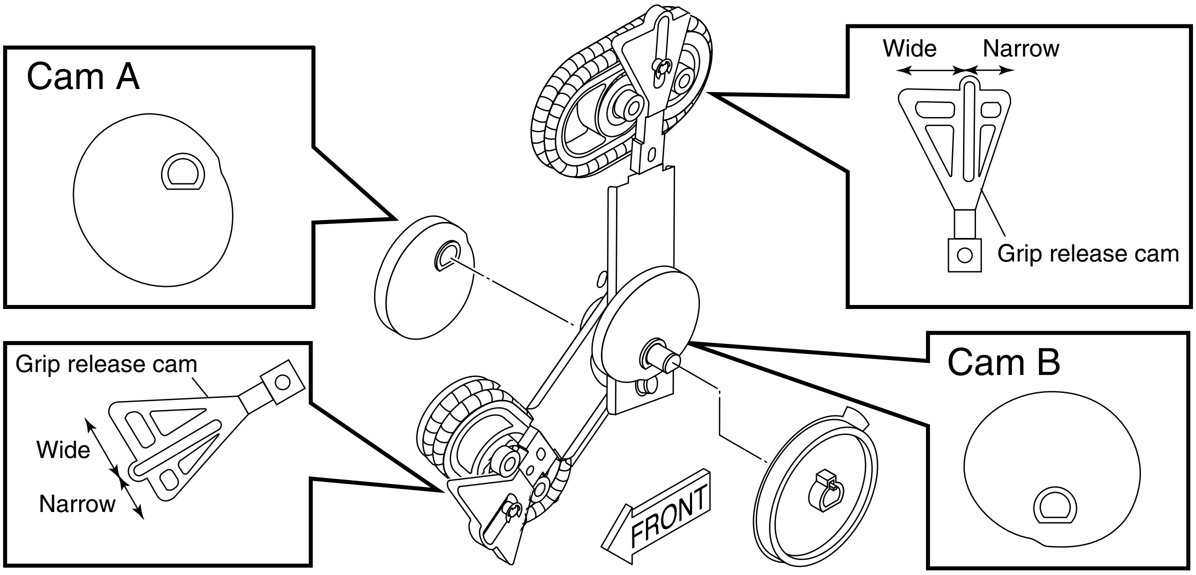
◆ *INSTRUCTION* ◆

The cams differ in shape depending on where they are attached. When attaching the cams, use care not to confuse their locations.

For reinstallation, reverse the removal steps.

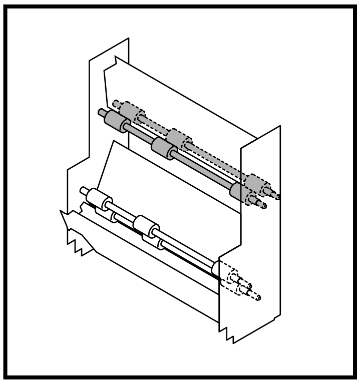
■ Check/Adjustment Procedures

- Make sure that the cams are attached correctly.


Cam A
Wide
Narrow
Grip release cam
Grip release cam
Wide
Narrow
Cam B
FRONT

FR6H4609.EPS

7.5 Upper Grip Roller



FR6H4655.EPS

■ Removal Procedures

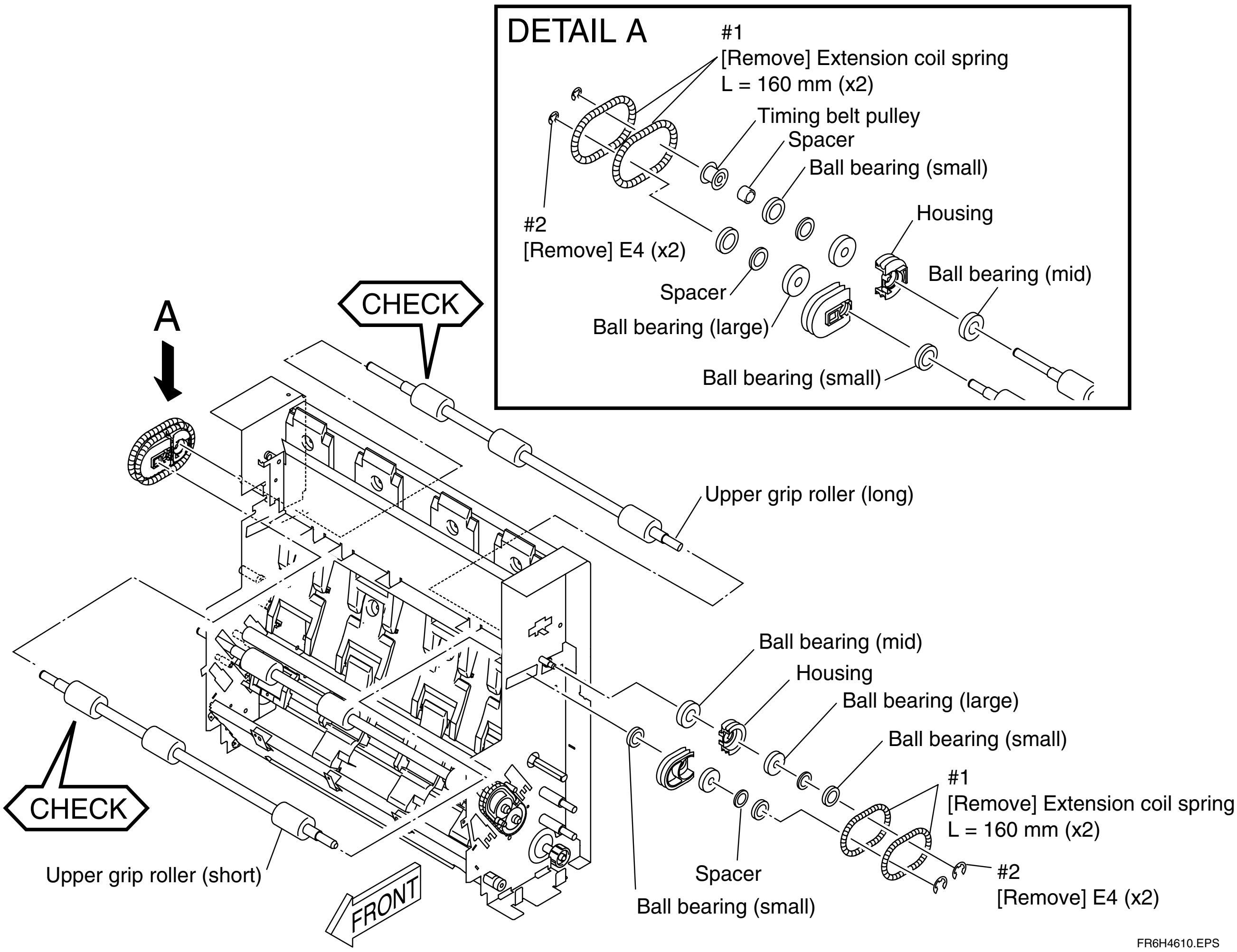
(1) Remove the grip mechanism (left-hand side).

☞ "7.3 Grip Mechanism (Left-Hand Side)"

(2) Remove the grip mechanism (right-hand side)

☞ "7.4 Grip Mechanism (Right-Hand Side)"

(3) Remove the upper grip roller (long) and upper grip roller (short).


DETAIL A
#1
[Remove] Extension coil spring
L = 160 mm (x2)
Timing belt pulley
Spacer
Ball bearing (small)
Housing
#2
[Remove] E4 (x2)
Ball bearing (mid)
Spacer
Ball bearing (large)
Ball bearing (small)
A
CHECK
Upper grip roller (long)
Ball bearing (mid)
Housing
Ball bearing (large)
Ball bearing (small)
#1
[Remove] Extension coil spring
L = 160 mm (x2)
CHECK
#2
[Remove] E4 (x2)
Upper grip roller (short)
Spacer
Ball bearing (small)
FRONT

FR6H4610.EPS

■ Reinstallation Procedures

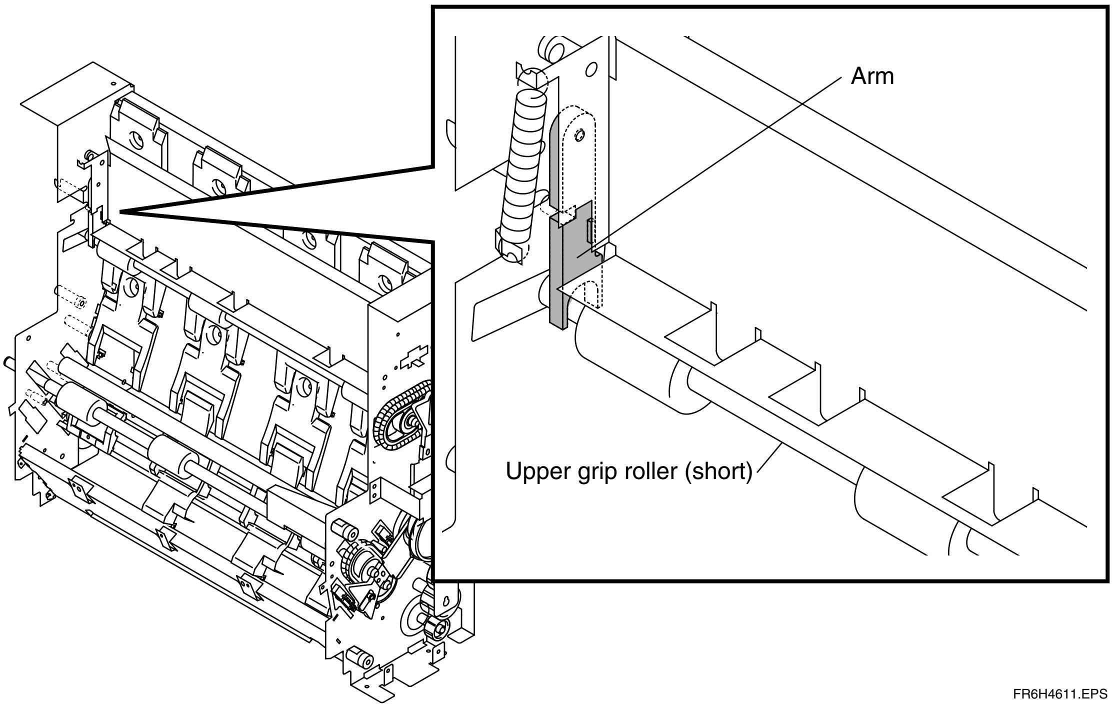
◆ *INSTRUCTION* ◆

The upper grip rollers differ in length depending on where they are attached. When attaching the upper grip rollers, use care not to confuse their locations.

For reinstallation, reverse the removal steps.

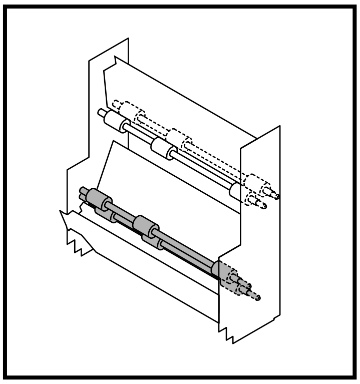
■ Check/Adjustment Procedures

- Check the attachment locations of the upper grip rollers.
- Make sure that the upper grip roller (short) is fitted into the notch of the arm.



FR6H4611.EPS

7.6 Lower Grip Roller



FR6H4656.EPS

■ Removal Procedures

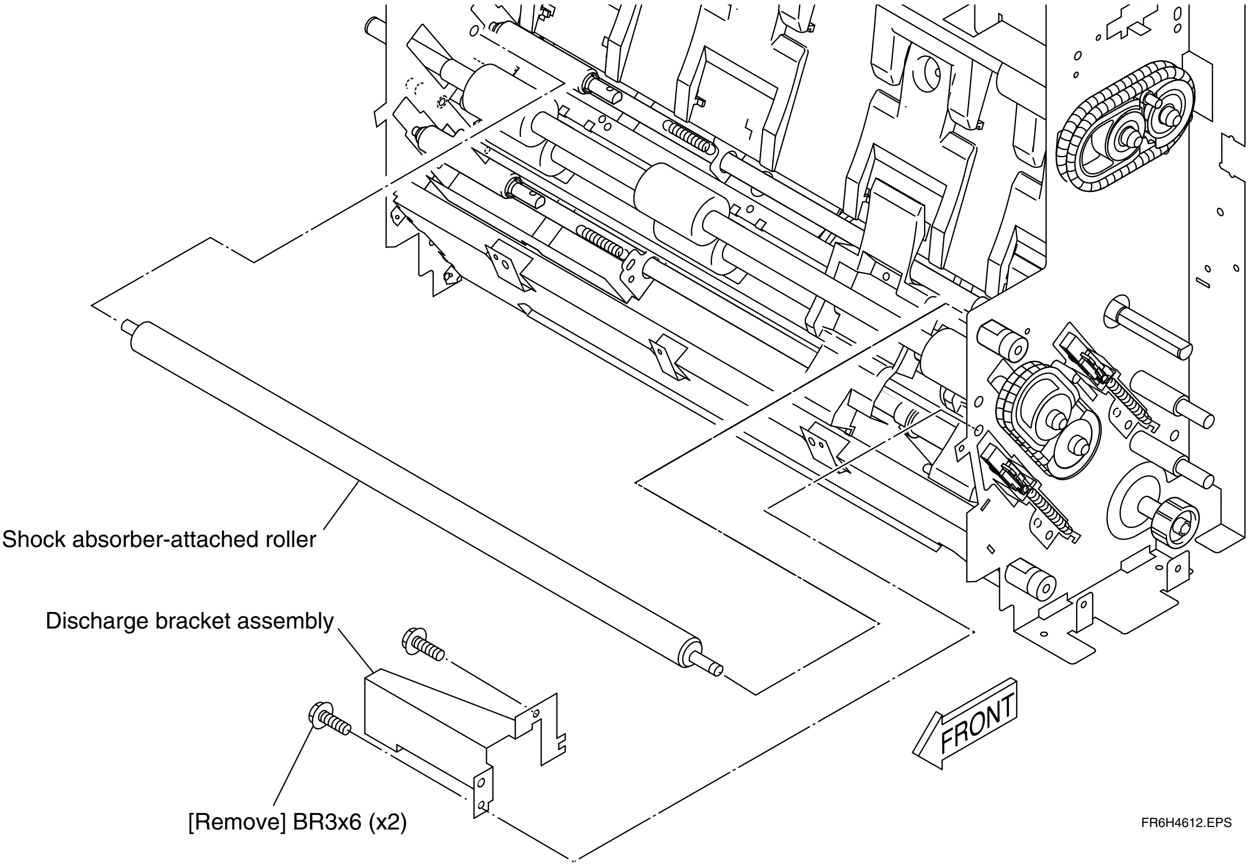
(1) Remove the grip mechanism (left-hand side).

☞ “7.3 Grip Mechanism (Left-Hand Side)”

(2) Remove the grip mechanism (right-hand side)

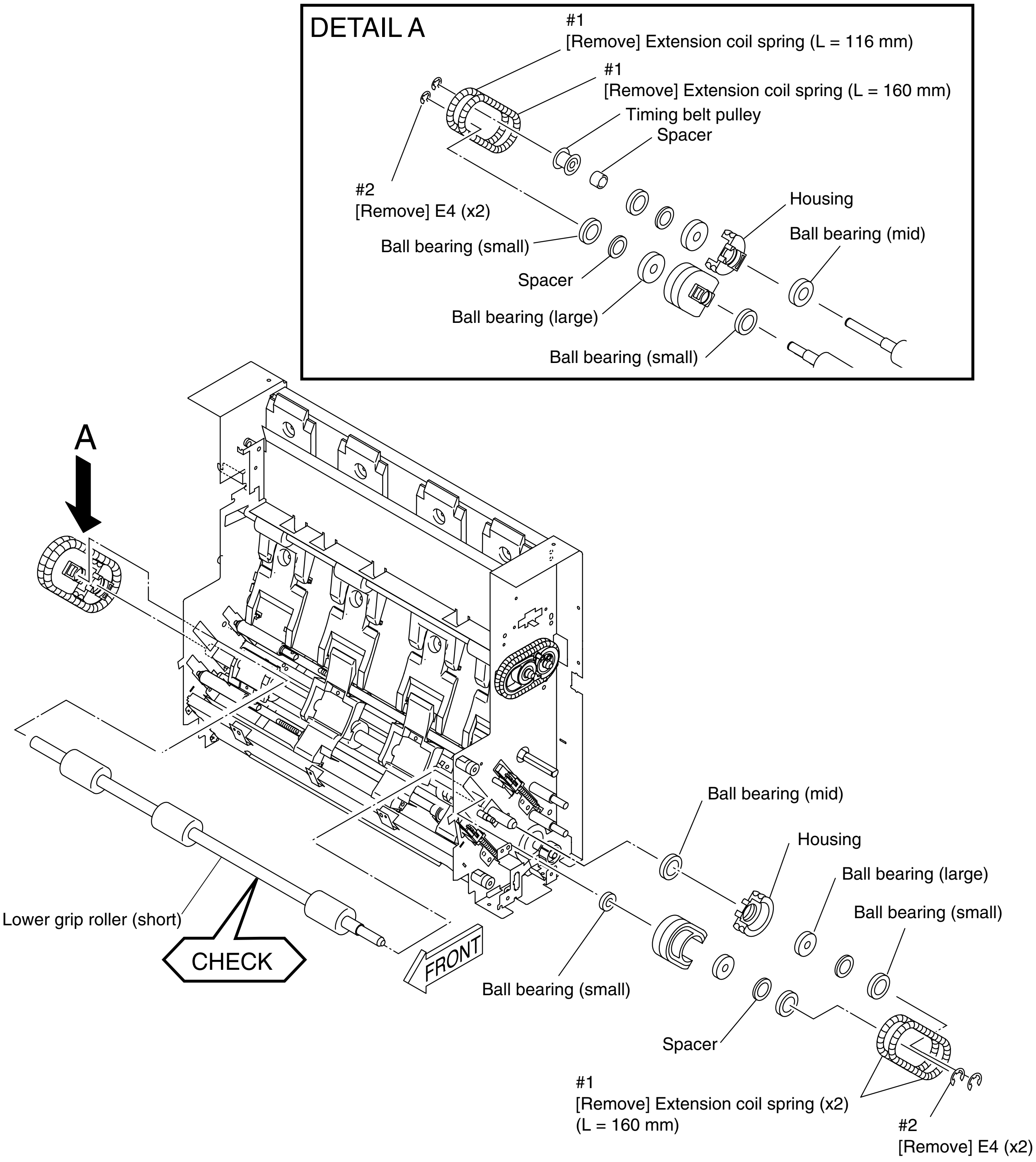
☞ “7.4 Grip Mechanism (Right-Hand Side)”

(3) Remove the shock absorber-attached roller.


Shock absorber-attached roller
Discharge bracket assembly
[Remove] BR3x6 (x2)
FRONT

FR6H4612.EPS

(4) Remove the lower grip roller (short).


DETAIL A
#1
[Remove] Extension coil spring (L = 116 mm)
#1
[Remove] Extension coil spring (L = 160 mm)
Timing belt pulley
Spacer
#2
[Remove] E4 (x2)
Housing
Ball bearing (mid)
Ball bearing (small)
Spacer
Ball bearing (large)
Ball bearing (small)
A
Ball bearing (mid)
Housing
Ball bearing (large)
Ball bearing (small)
Lower grip roller (short)
CHECK
FRONT
Ball bearing (small)
Spacer
#1
[Remove] Extension coil spring (x2)
(L = 160 mm)
#2
[Remove] E4 (x2)

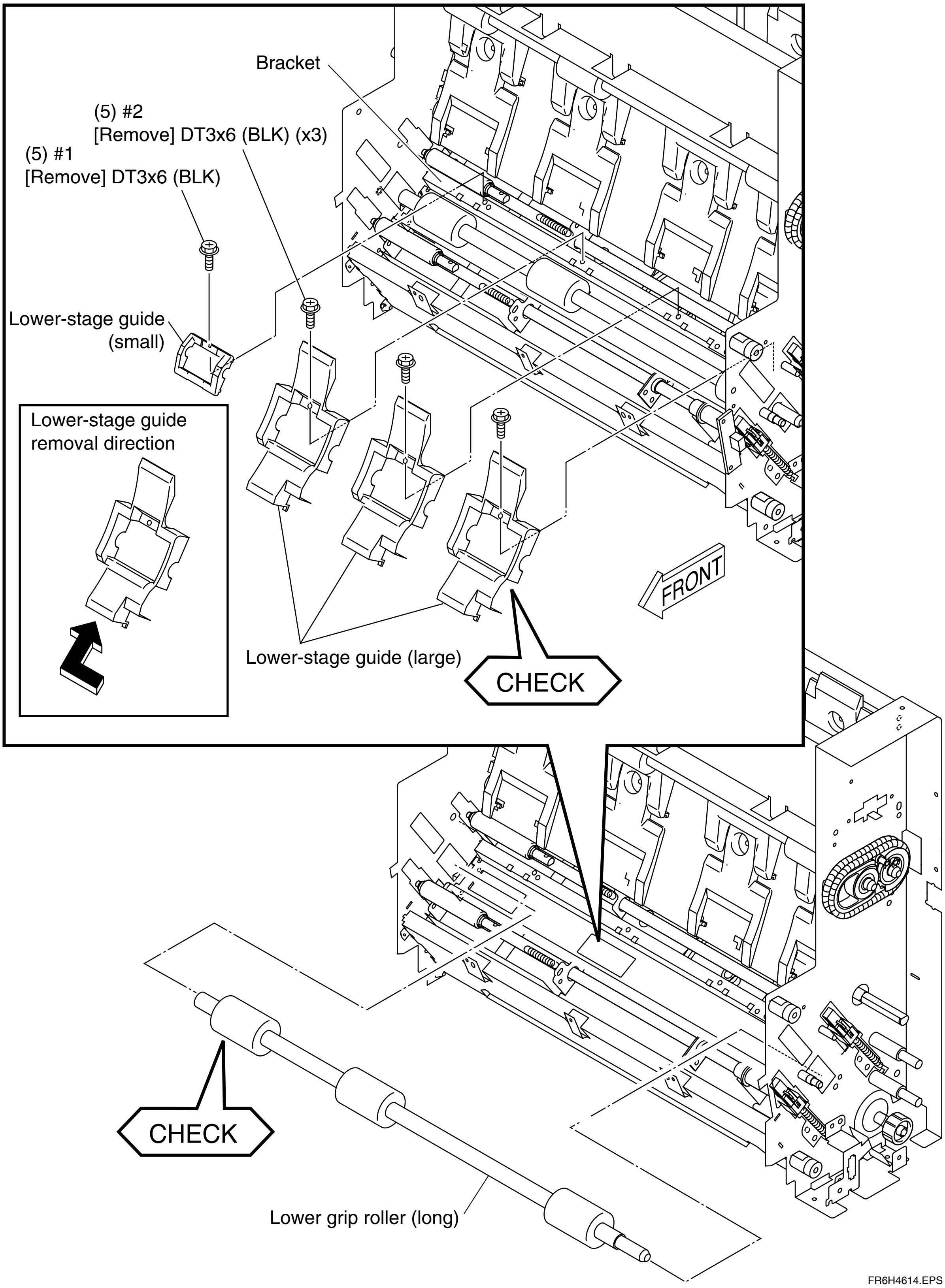
FR6H4613.EPS

◆ NOTE ◆

The lower-stage guides should be removed in accordance with their removal direction.

(5) Remove the lower-stage guides (large) and (small).

(6) Remove the lower grip roller (long).


Bracket
(5) #2
[Remove] DT3x6 (BLK) (x3)
(5) #1
[Remove] DT3x6 (BLK)
Lower-stage guide (small)
Lower-stage guide removal direction
Lower-stage guide (large)
CHECK
FRONT
CHECK
Lower grip roller (long)

FR6H4614.EPS

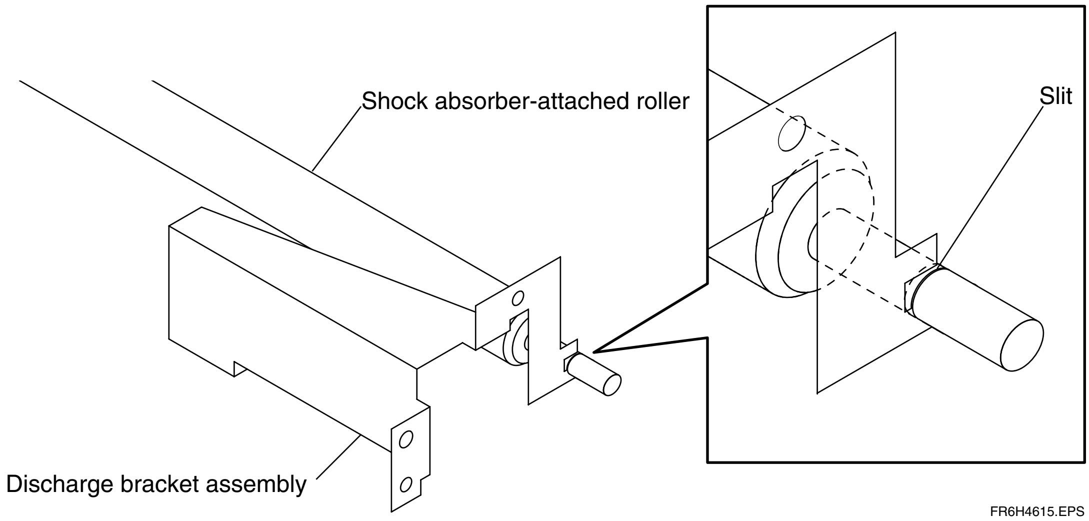
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

The extension coil springs and lower grip rollers differ in length depending on where they are attached. When attaching the extension coil springs and lower grip rollers, use care not to confuse their locations.

◆ *NOTE* ◆

When attaching the shock absorber-attached roller, ensure that the notch of the discharge bracket assembly is fitted into the slit.

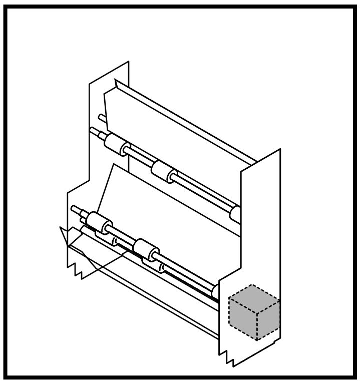

Shock absorber-attached roller
Slit
Discharge bracket assembly
FR6H4615.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Check the attachment locations of the lower grip rollers.
- Make sure that the latch of the lower-stage guide is locked to the bracket.

7.7 Motor (MC2)



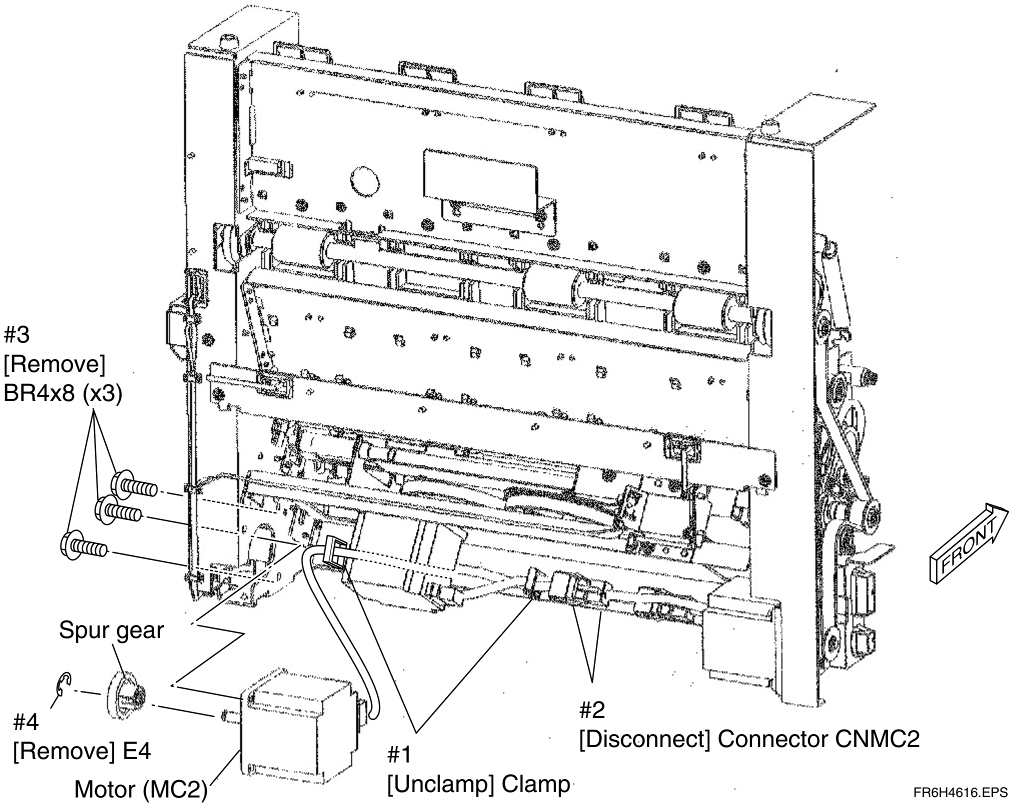
FR6H4657.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

☞ “7.1 Side-Positioning Conveyor”

(2) Remove the motor (MC2).

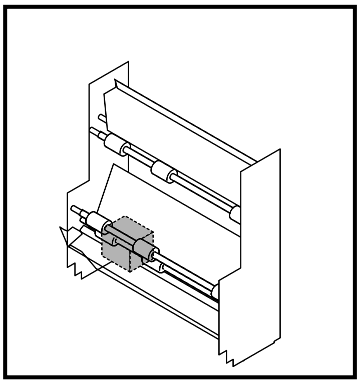

#3
[Remove]
BR4x8 (x3)
Spur gear
#4
[Remove] E4
Motor (MC2)
#1
[Unclamp] Clamp
#2
[Disconnect] Connector CNMC2
FRONT

FR6H4616.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

7.8 Motor (MC3)



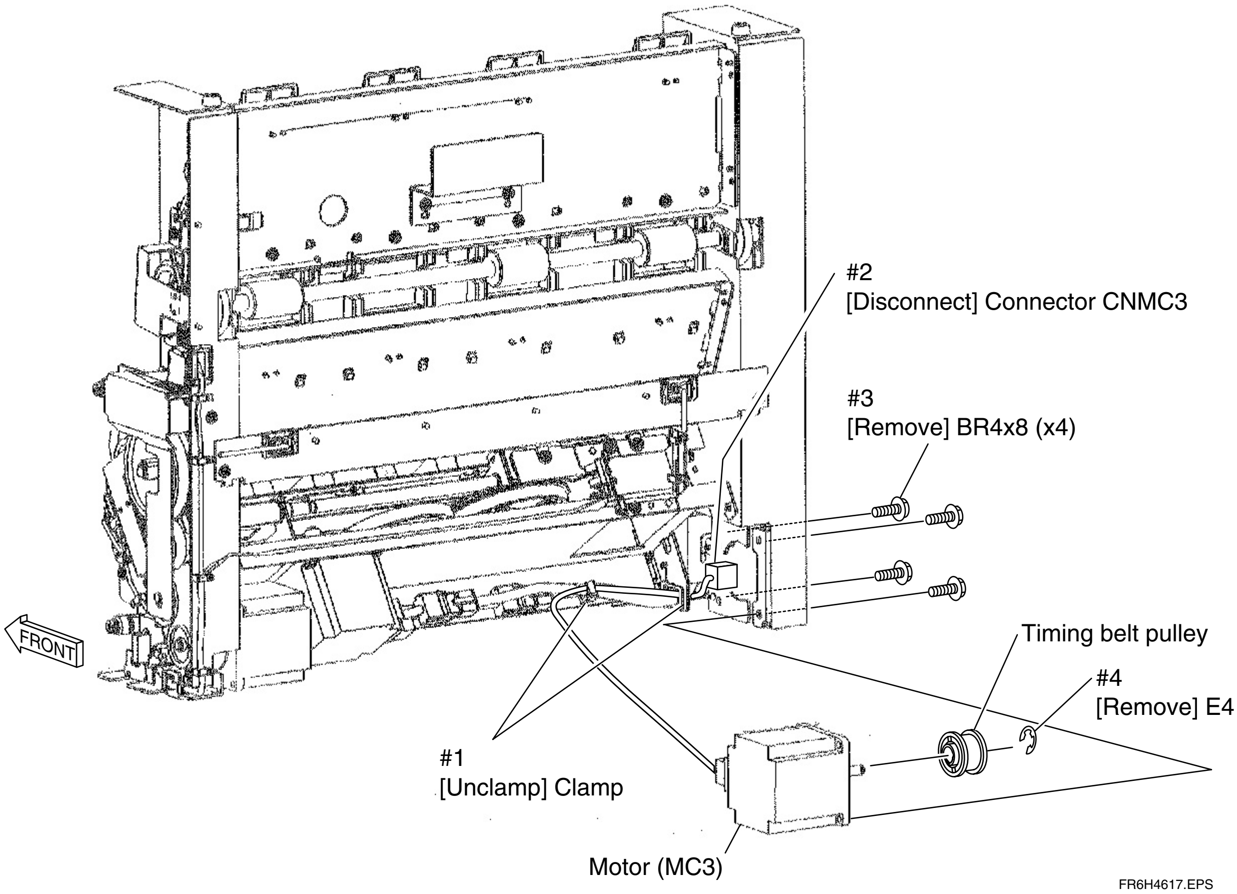
FR6H4658.EPS

■ Removal Procedures

(1) Remove the timing belt.

☞ "7.2 Timing Belt"

(2) Remove the motor (MC3).

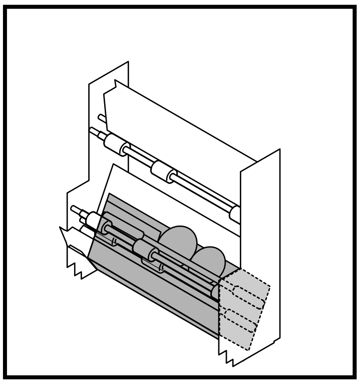

#2
[Disconnect] Connector CNMC3
#3
[Remove] BR4x8 (x4)
FRONT
Timing belt pulley
#4
[Remove] E4
#1
[Unclamp] Clamp
Motor (MC3)

FR6H4617.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

7.9 Latch Driver



FR6H4659.EPS

■ Removal Procedures

(1) Remove the motor (MC2).

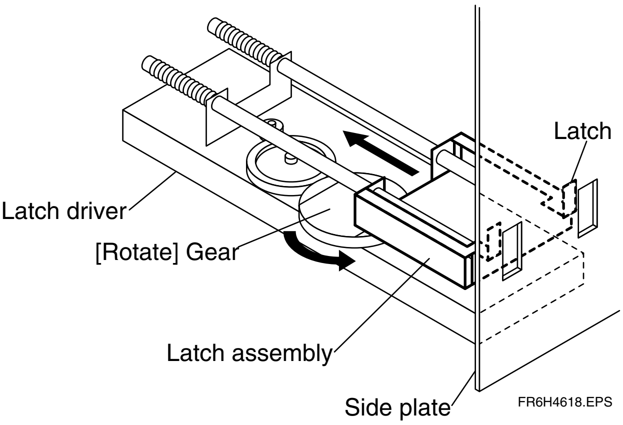
☞ "7.7 Motor (MC2)"

(2) Remove the motor (MC3).

☞ "7.8 Motor (MC3)"

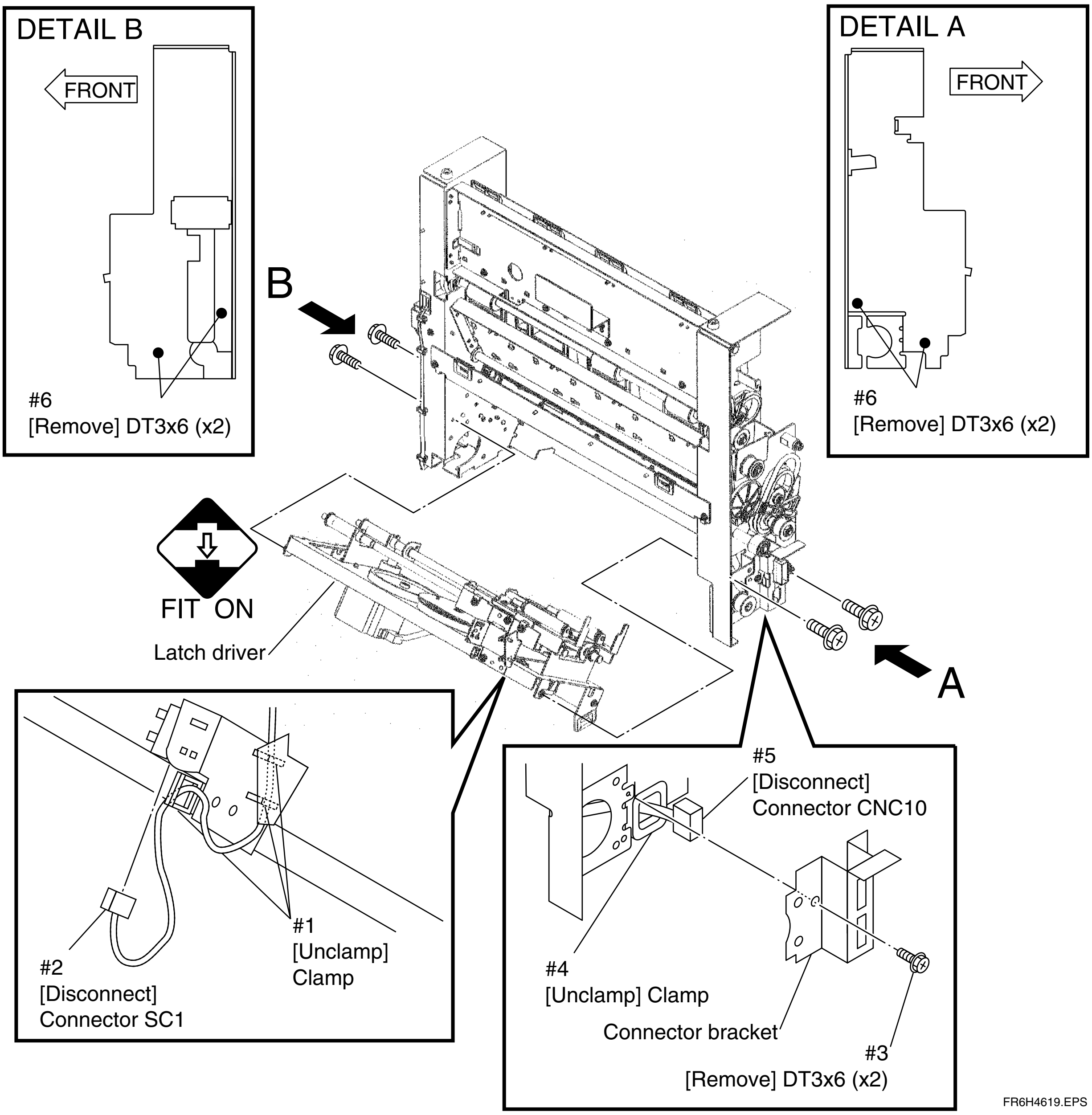
◆ *NOTE* ◆

To remove the latch driver, manually rotate the gear until the latches of the latch assembly are positioned inside the side plate of the machine.

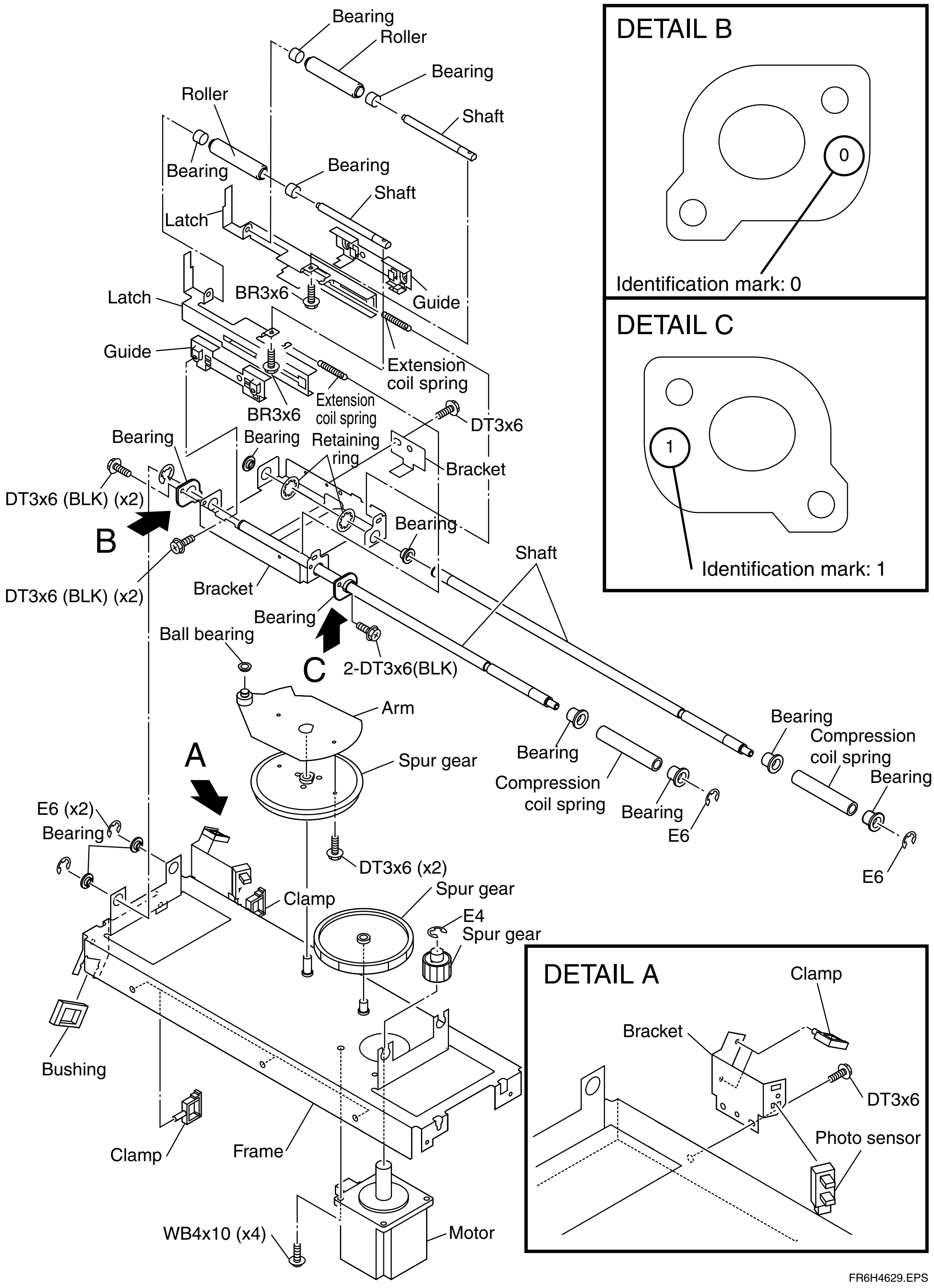

Latch
Latch driver
[Rotate] Gear
Latch assembly
Side plate

FR6H4618.EPS

(3) Remove the latch driver.

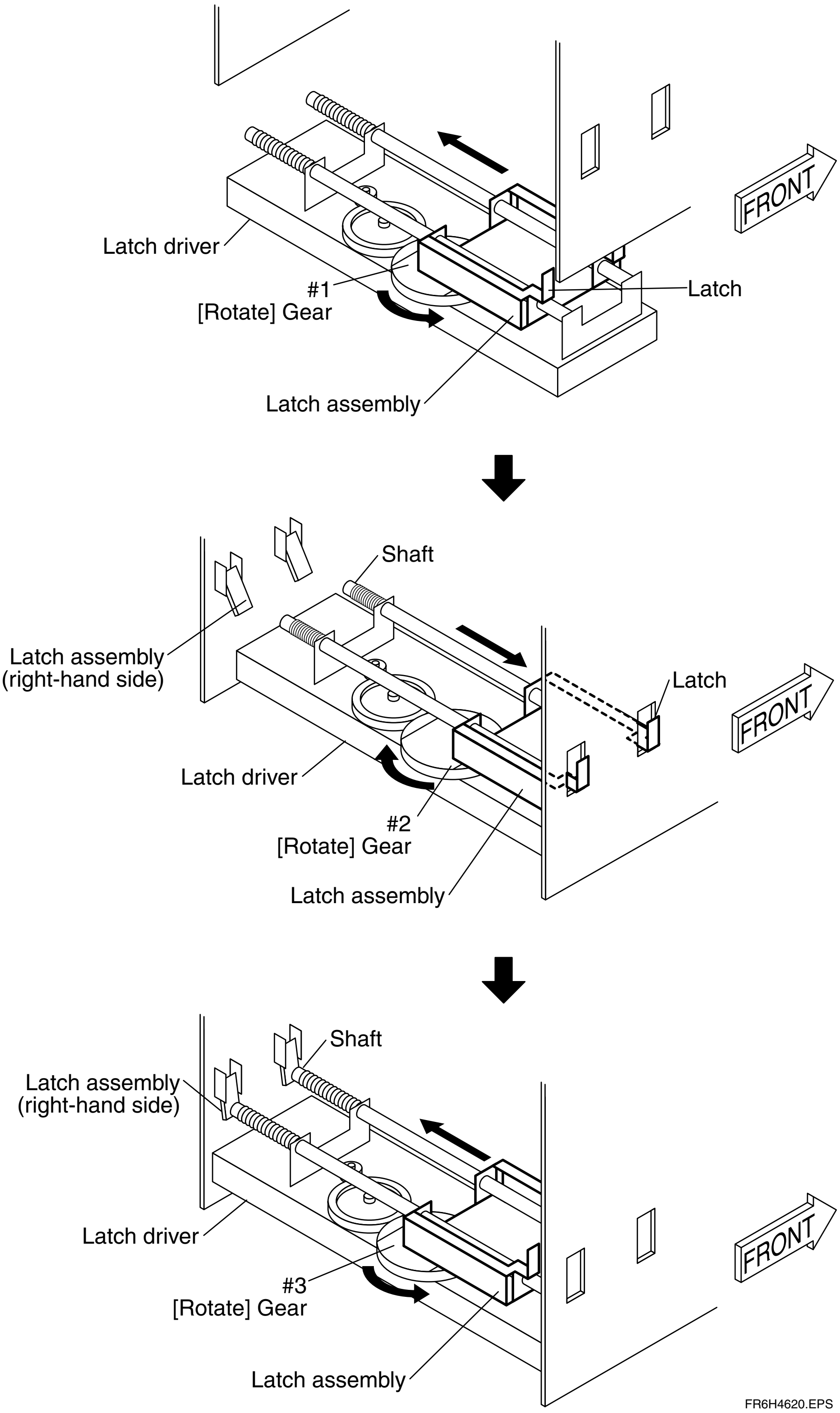

DETAIL B
FRONT
#6
[Remove] DT3x6 (x2)
DETAIL A
FRONT
#6
[Remove] DT3x6 (x2)
B
A
FIT ON
Latch driver
#1
[Unclamp]
Clamp
#2
[Disconnect]
Connector SC1
#5
[Disconnect]
Connector CNC10
#4
[Unclamp] Clamp
Connector bracket
#3
[Remove] DT3x6 (x2)
FR6H4619.EPS

■ Exploded View


Bearing
Roller
Bearing
Shaft
Roller
Bearing
Bearing
Shaft
Latch
Latch
BR3x6
Guide
Guide
Extension
coil spring
BR3x6
Extension
coil spring
DT3x6
Bearing
Bearing
Retaining
ring
Bracket
DT3x6 (BLK) (x2)
B
Bearing
Shaft
DT3x6 (BLK) (x2)
Bracket
Bearing
Ball bearing
C
2-DT3x6(BLK)
Arm
A
Spur gear
Bearing
Compression
coil spring
Bearing
E6
Bearing
Compression
coil spring
Bearing
E6
E6 (x2)
Bearing
DT3x6 (x2)
Clamp
Spur gear
E4
Spur gear
Bushing
Clamp
Frame
WB4x10 (x4)
Motor
DETAIL B
0
Identification mark: 0
DETAIL C
1
Identification mark: 1
DETAIL A
Clamp
Bracket
DT3x6
Photo sensor
FR6H4629.EPS

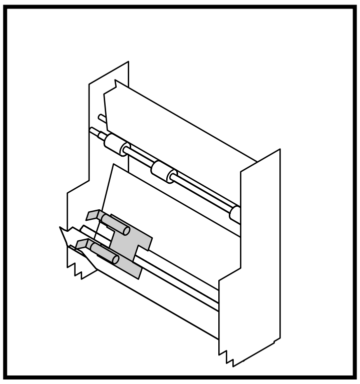
■ Reinstallation Procedures

(1) While manually rotating the gear in the direction of the arrow, attach the latch assembly.


FRONT
Latch driver
#1
[Rotate] Gear
Latch
Latch assembly
Shaft
Latch assembly
(right-hand side)
Latch
FRONT
Latch driver
#2
[Rotate] Gear
Latch assembly
Shaft
Latch assembly
(right-hand side)
Latch driver
FRONT
#3
[Rotate] Gear
Latch assembly
FR6H4620.EPS

(2) Press the latch driver to the half punch and snap it into place.

7.10 Latch Assembly (Latch Driver)



FR6H4660.EPS

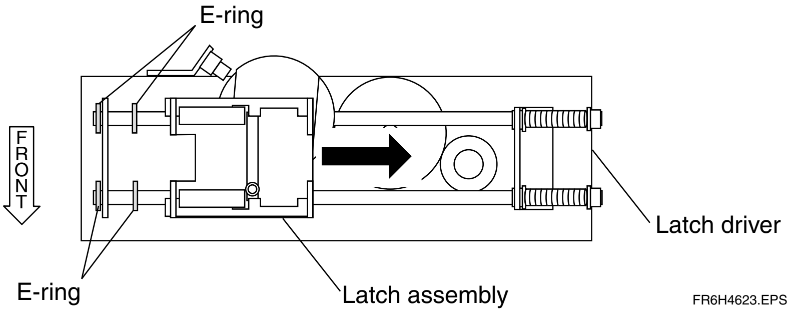
■ Removal Procedures

(1) Remove the latch driver.

☞ “7.9 Latch Driver

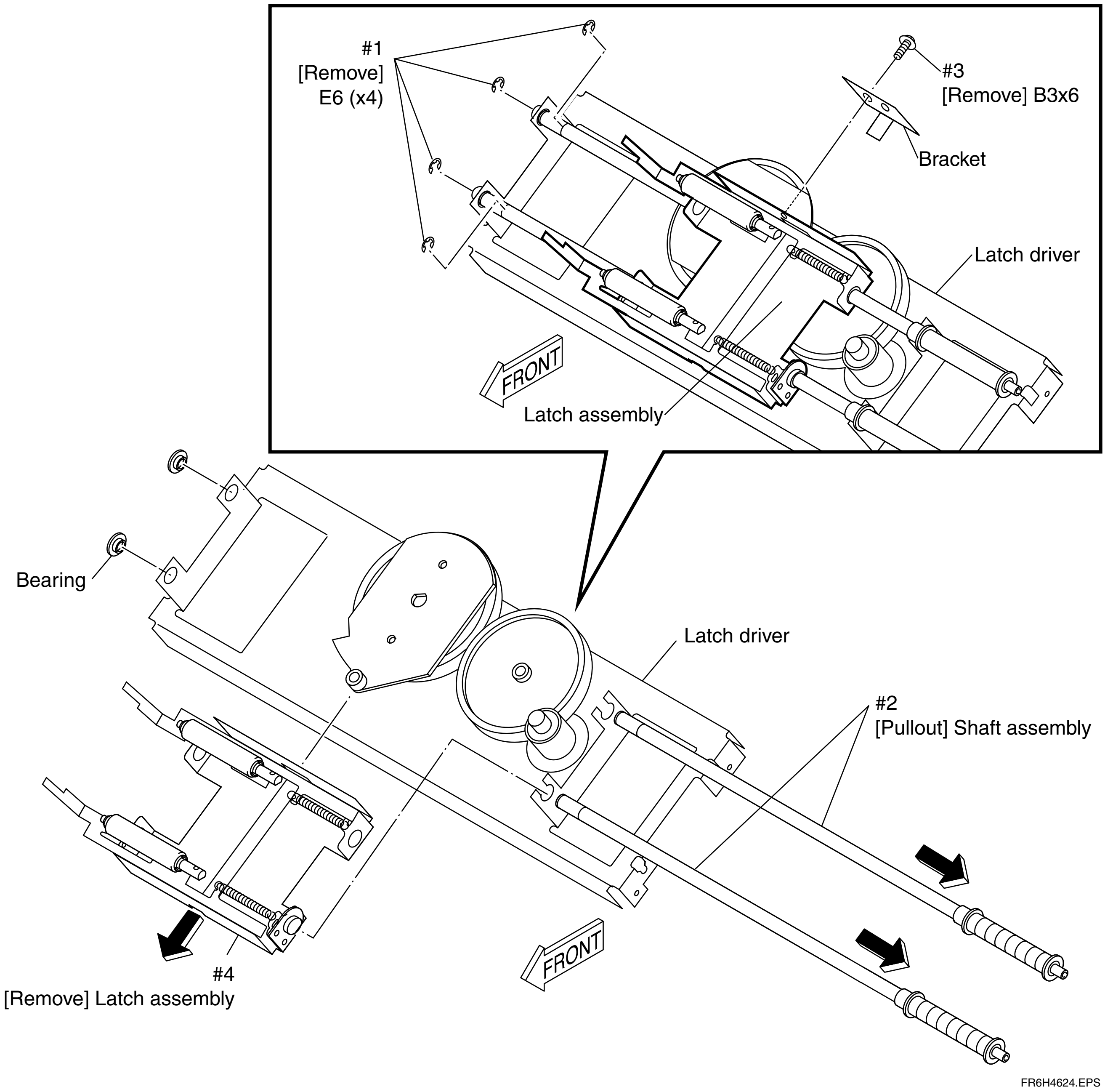
◇ *REFERENCE* ◇

To remove the latch assembly, slide the latch assembly in the direction of the arrow as illustrated below to facilitate access to the E-rings that retain the shaft.


E-ring
FRONT
Latch driver
E-ring
Latch assembly

FR6H4623.EPS

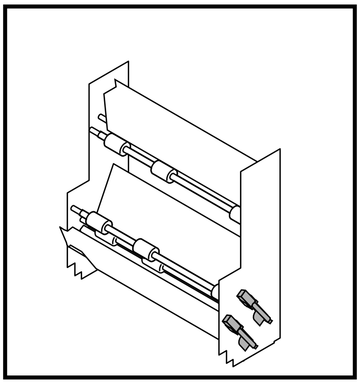
(2) Remove the latch assembly.


#1
[Remove]
E6 (x4)
#3
[Remove] B3x6
Bracket
Latch driver
FRONT
Latch assembly
Bearing
Latch driver
#2
[Pullout] Shaft assembly
#4
[Remove] Latch assembly
FRONT
FR6H4624.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

7.11 Latch Assembly (Right-Hand Side)



FR6H4661EPS

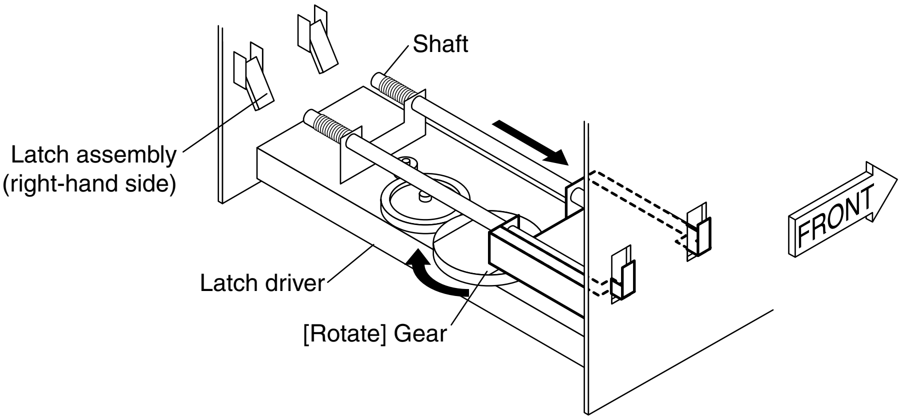
■ Removal Procedures

(1) Remove the grip mechanism (right-hand side).

☞ “7.4 Grip Mechanism (Right-Hand Side)”

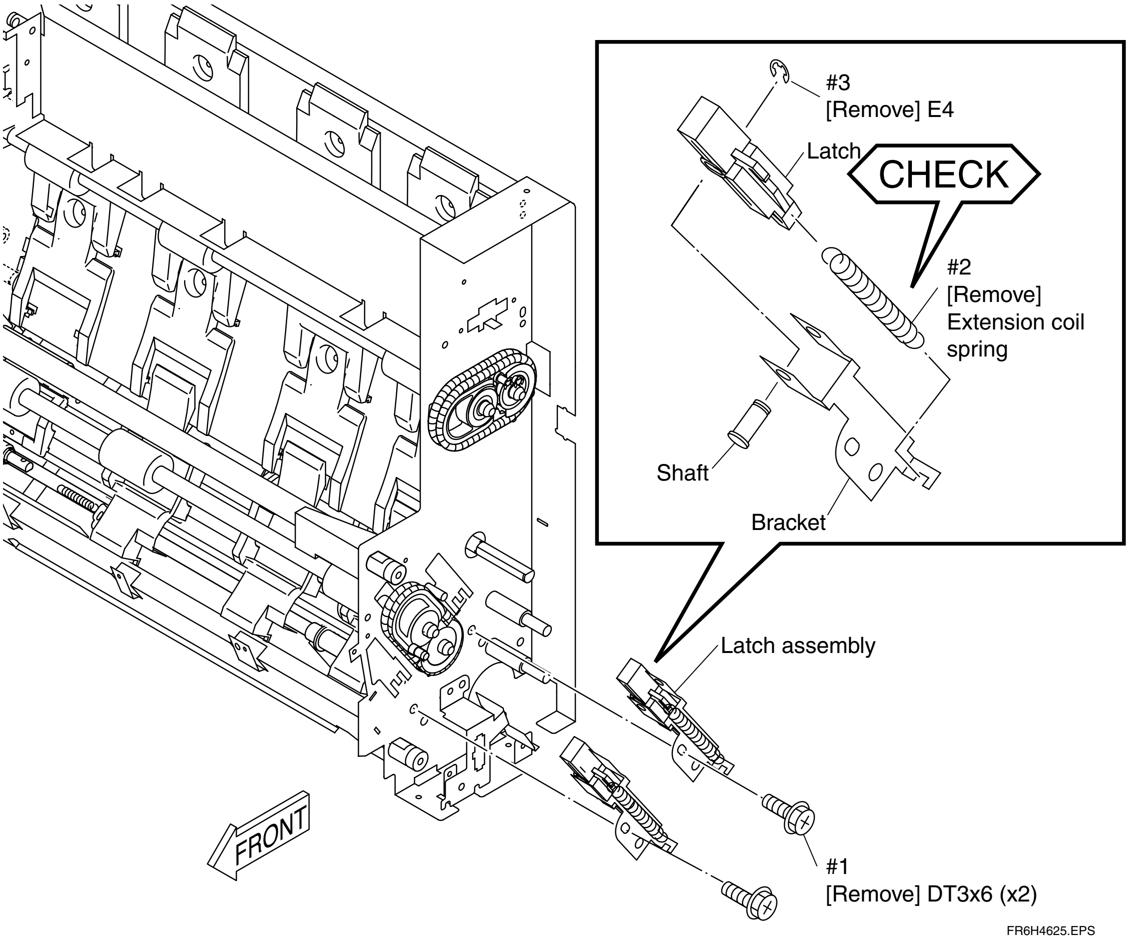
◆ *NOTE* ◆

To remove the latch assembly (right-hand side), manually rotate the gear in the direction of the arrow to shift the shafts of the latch driver away from the latch assembly (right-hand side).


Shaft
Latch assembly
(right-hand side)
Latch driver
[Rotate] Gear
FRONT

FR6H4630.EPS

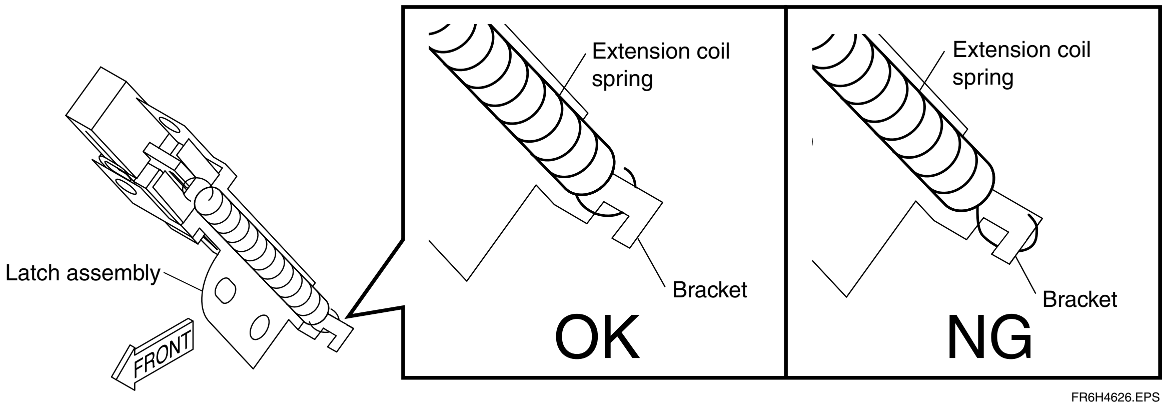
(2) Remove the latch assembly.


#3
[Remove] E4
Latch
CHECK
#2
[Remove]
Extension coil
spring
Shaft
Bracket
Latch assembly
FRONT
#1
[Remove] DT3x6 (x2)
FR6H4625.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

The extension coil spring should be attached properly.

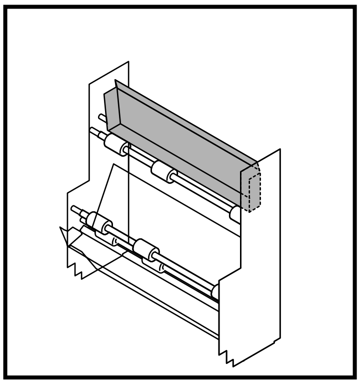

Latch assembly
FRONT
Extension coil
spring
Bracket
OK
Extension coil
spring
Bracket
NG
FR6H4626.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the extension coil spring is attached correctly.

7.12 Movable Guide



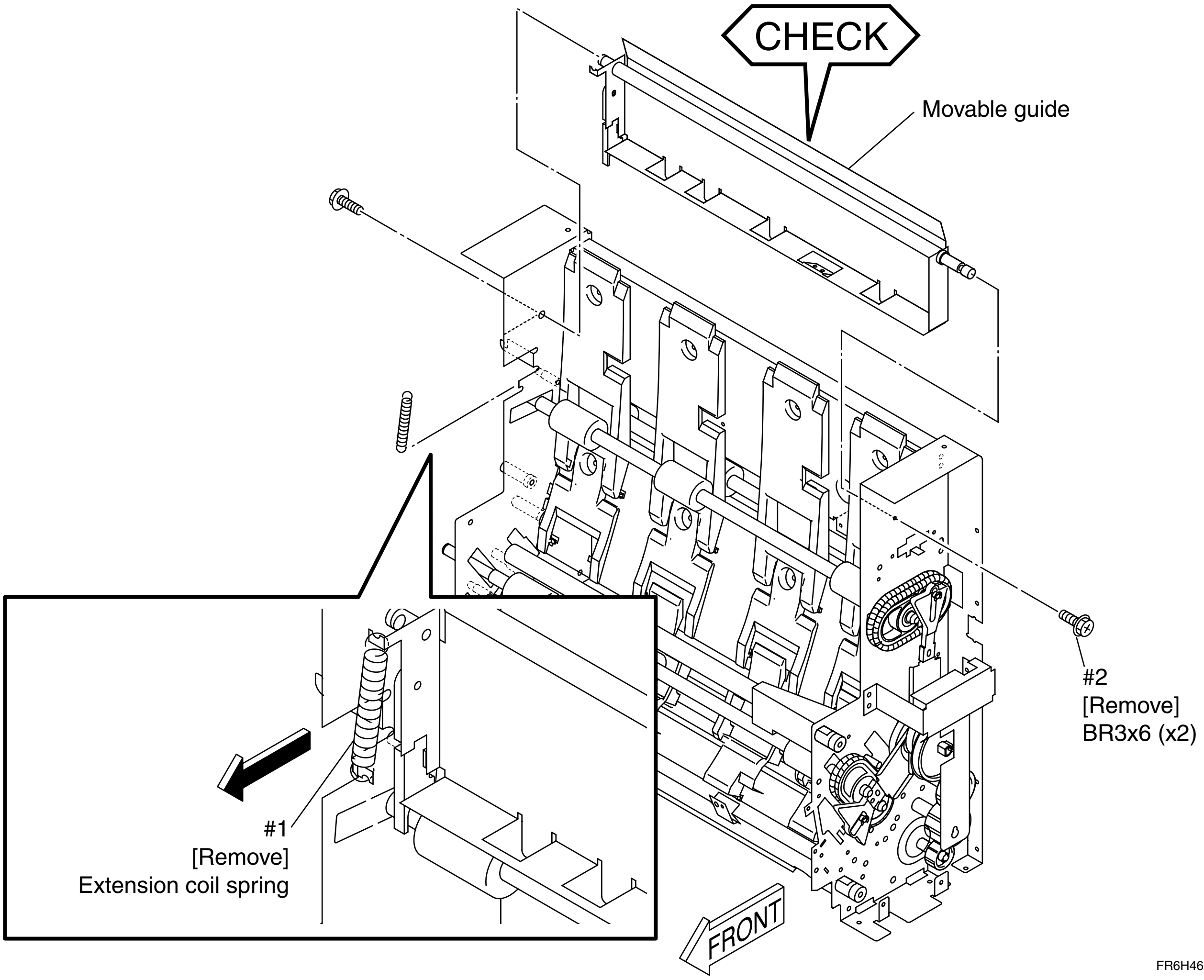
FR6H4662.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

☞ "7.1 Side-Positioning Conveyor

(2) Remove the movable guide.


CHECK
Movable guide
#2
[Remove]
BR3x6 (x2)
#1
[Remove]
Extension coil spring
FRONT

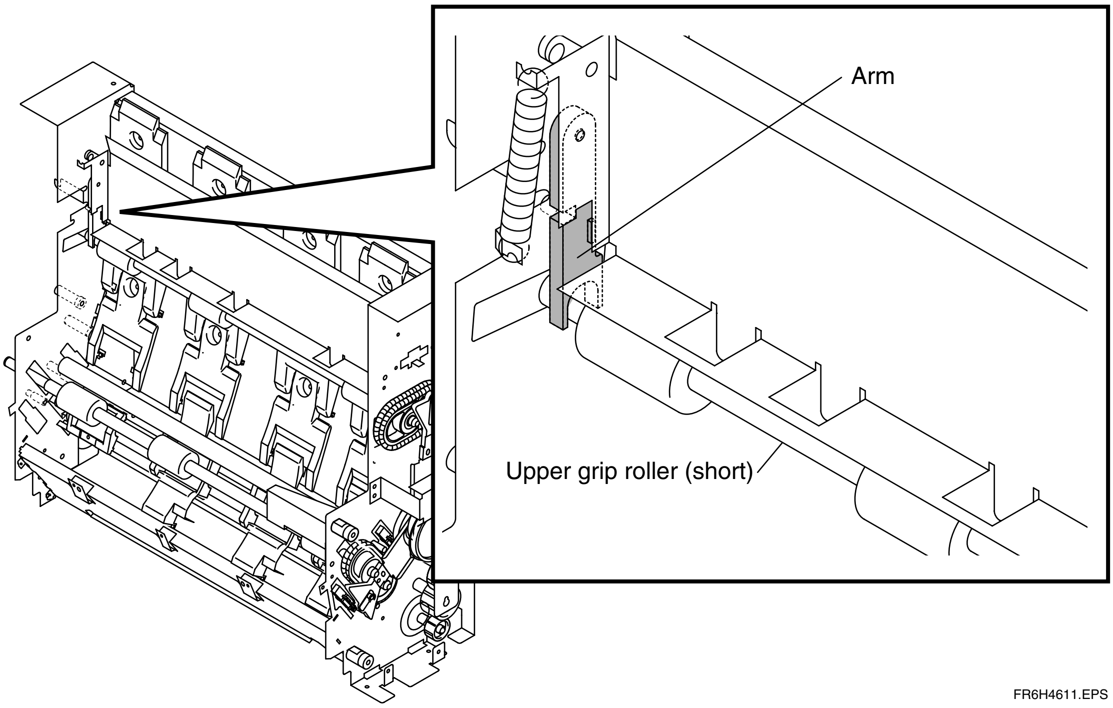
FR6H4627.EPS

■ Reinstallation Procedures

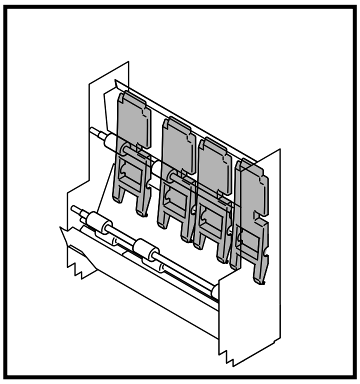
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the lower grip roller is fitted into the notch of the arm.


Arm
Upper grip roller (short)
FR6H4611.EPS

7.13 Upper-Stage Guide



FR6H4663.EPS

■ Removal Procedures

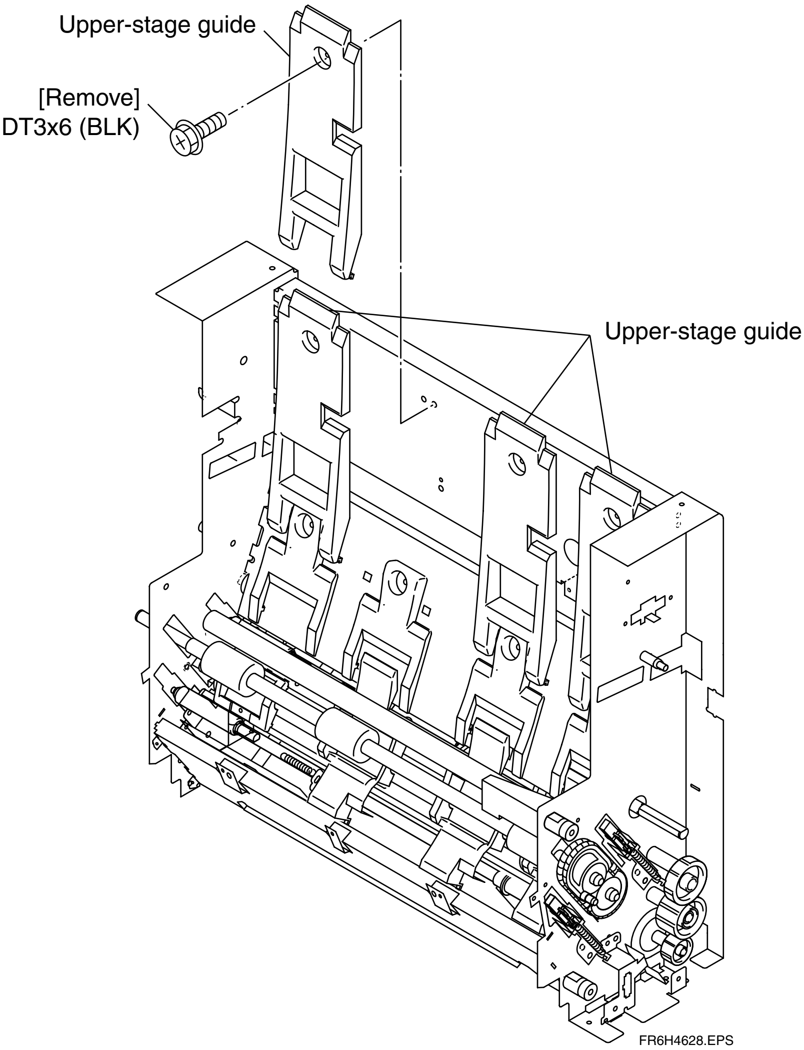
(1) Remove the upper grip roller.

☞ “7.5 Upper Grip Roller”

(2) Remove the movable guide.

☞ “7.12 Movable Guide”

(3) Remove the upper-stage guide.


Upper-stage guide
[Remove]
DT3x6 (BLK)
Upper-stage guide

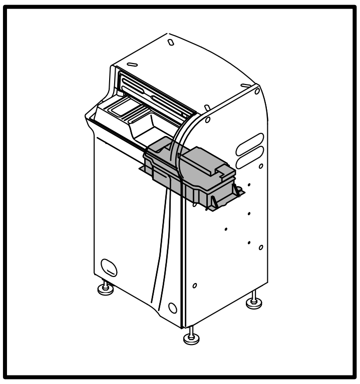
FR6H4628.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

8. Removing and Reinstalling the Scanning Optics Unit

8.1 Scanning Optics Unit



FR6H4751.EPS

WARNING

The scanning optics unit should not be removed or installed by other than a service engineer who has been trained to do so.

CAUTION

When servicing the scanning optics unit, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

◆ ***INSTRUCTION*** ◆

Do not remove the top cover of the scanning optics unit.

■ Removal Procedures

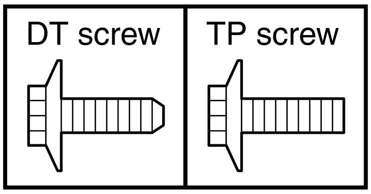
(1) Remove the covers.

- Front cover
- Left-hand side cover
- Right-hand side cover

☞ “3.1 Removing and Reinstalling the Covers”

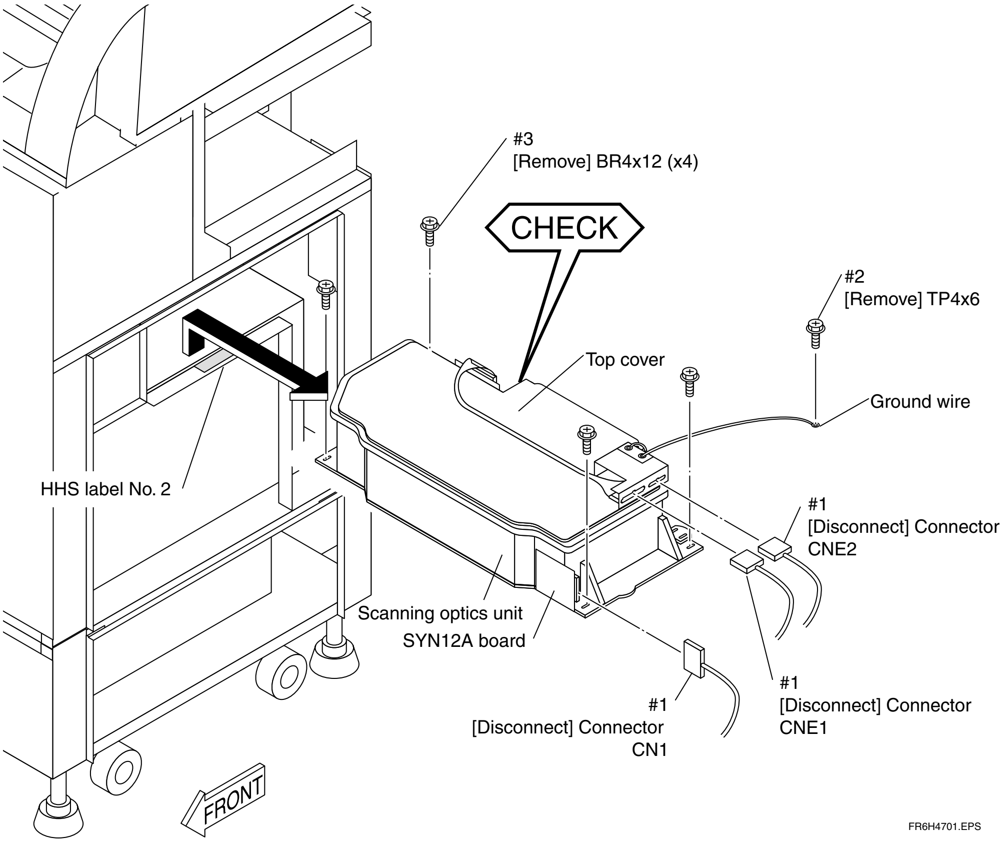
◆ NOTE ◆

The TP screw used to secure the ground wire is similar in shape to a DT screw. When attaching the screw, check its shape to avoid confusing it with a wrong one.


DT screw
TP screw

FR6H4105.EPS

(2) Remove the scanning optics unit.


#3
[Remove] BR4x12 (x4)
CHECK
#2
[Remove] TP4x6
Top cover
Ground wire
HHS label No. 2
#1
[Disconnect] Connector
CNE2
Scanning optics unit
SYN12A board
#1
[Disconnect] Connector
CN1
#1
[Disconnect] Connector
CNE1
FRONT

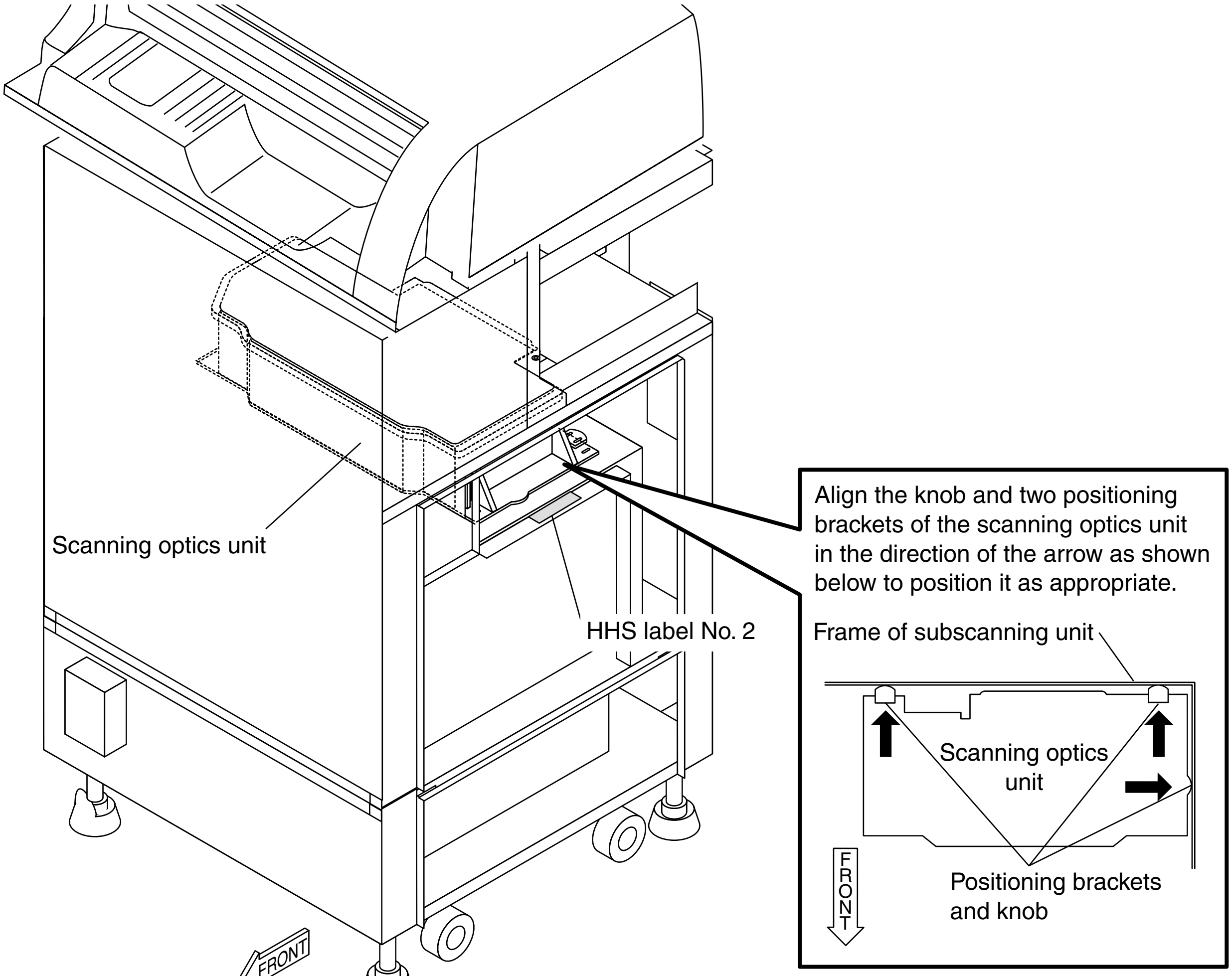
FR6H4701.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the scanning optics unit, press the positioning brackets of the scanning optics unit against the frame of the subscanning unit to secure it in place.

For reinstallation, reverse the removal steps.


Scanning optics unit
HHS label No. 2
FRONT
Frame of subscanning unit
Scanning optics unit
Positioning brackets and knob
FRONT

Align the knob and two positioning brackets of the scanning optics unit in the direction of the arrow as shown below to position it as appropriate.

FR6H4703.EPS

■ Combination of Scanning Optics Unit Version and CR-IR346RU Software Version

When updating the version of the scanning optics unit, check the version combination table below and update the version of the CR-IR346RU software as well.

Scanning optics unit version	CR-IR346RU software version
– 839Y0035A/B	– A02
839Y0035C –	A02 –

TR6H4902.EPS

☞ “13. Version Updating Procedures”

■ Check/Adjustment Procedures

◆ *INSTRUCTION* ◆

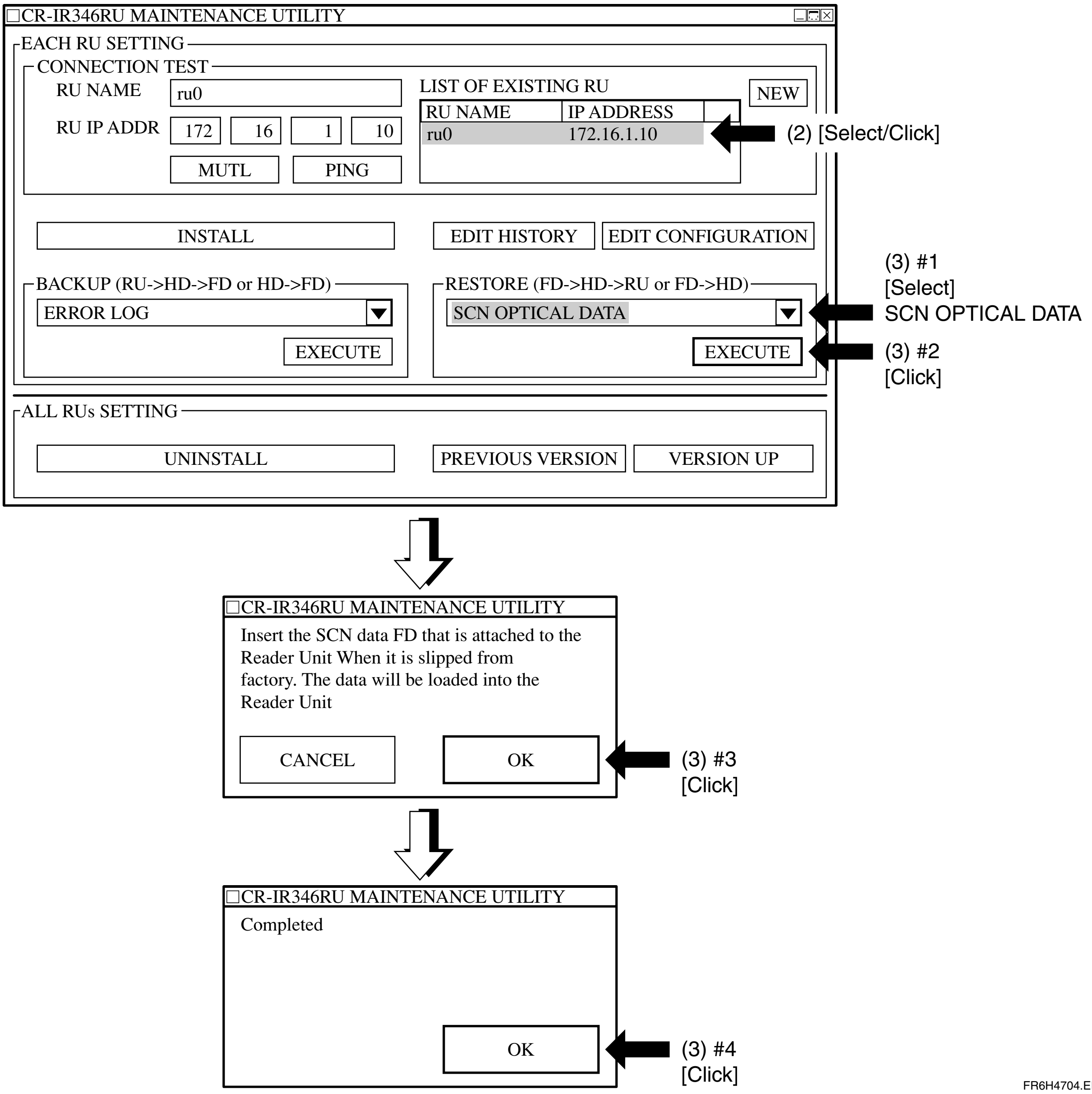
When the scanning optics unit is replaced with a new one, it is necessary to install the machine-specific data bundled therewith.
Take the following steps to install the machine-specific data.

(1) Set a machine-specific data floppy diskette into the FD drive.

(2) Open the CR-IR346RU MAINTENANCE UTILITY window and select the relevant RU from [LIST OF EXISTING RU].

(3) Install the machine-specific data for the scanning optics unit.

MAINTENANCE UTILITY window



☐CR-IR346RU MAINTENANCE UTILITY
EACH RU SETTING
CONNECTION TEST
MUTL
PING
NEW
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
EXECUTE
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP
CANCEL
OK
OK

RU NAME: ru0
RU IP ADDR: 172 16 1 10

LIST OF EXISTING RU

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD or HD->FD): ERROR LOG
RESTORE (FD->HD->RU or FD->HD): SCN OPTICAL DATA

(2) [Select/Click]

(3) #1
[Select]
SCN OPTICAL DATA

(3) #2
[Click]

☐CR-IR346RU MAINTENANCE UTILITY

Insert the SCN data FD that is attached to the Reader Unit When it is slipped from factory. The data will be loaded into the Reader Unit

(3) #3
[Click]

☐CR-IR346RU MAINTENANCE UTILITY

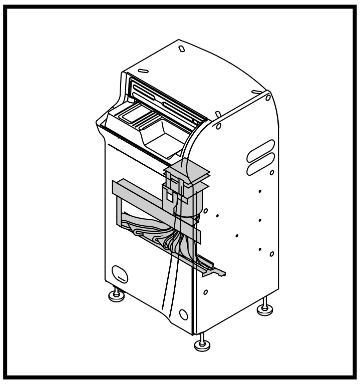
Completed

(3) #4
[Click]

FR6H4704.EPS

9. Removing and Reinstalling the Light-Collecting Unit

9.1 Light-Collecting Unit



FR6H4850.EPS

CAUTION

Never touch the light-receiving face of the light-collecting unit even when you are wearing gloves.

◆ INSTRUCTION ◆

When servicing the light-collecting unit, wear gloves.

■ Removal Procedures

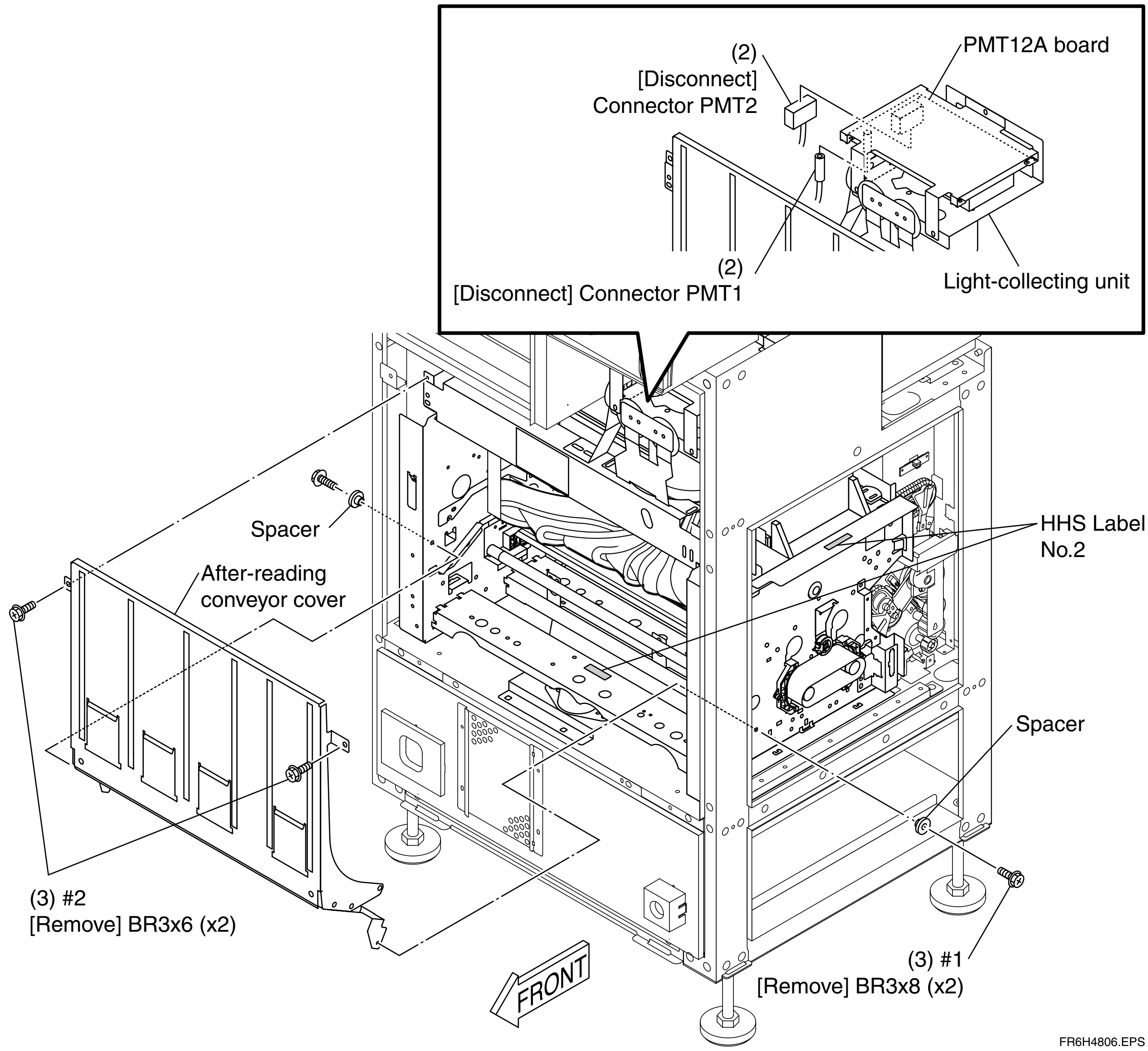
(1) Remove the covers.

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top light protect plate

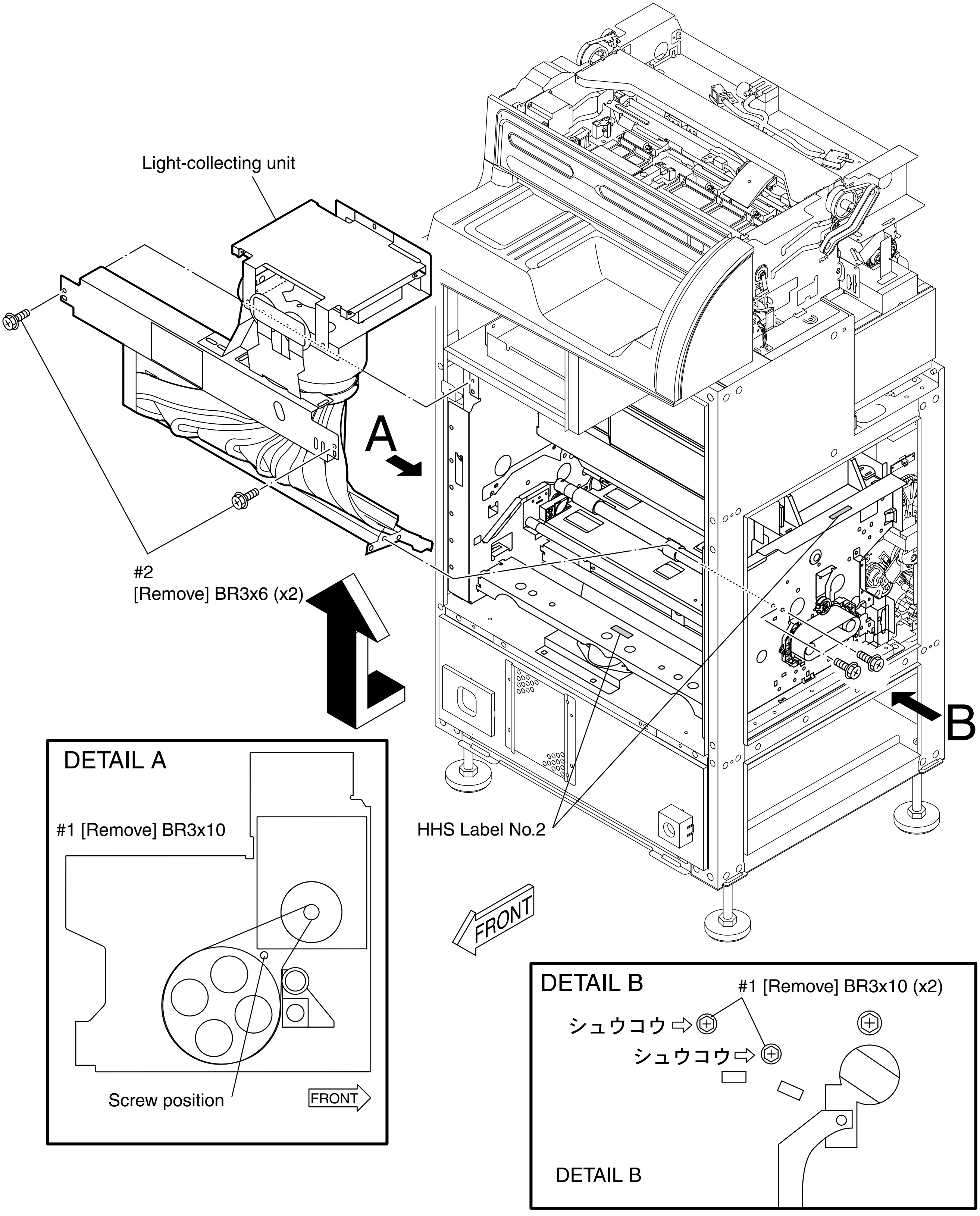
☞ “3.1 Removing and Reinstalling the Covers”

(2) Disconnect the connectors.

(3) Remove the after-reading conveyor cover.


(2)
[Disconnect]
Connector PMT2
PMT12A board
(2)
[Disconnect] Connector PMT1
Light-collecting unit
Spacer
After-reading
conveyor cover
HHS Label
No.2
Spacer
(3) #2
[Remove] BR3x6 (x2)
FRONT
(3) #1
[Remove] BR3x8 (x2)
FR6H4806.EPS

(4) Remove the light-collecting unit.


Light-collecting unit
A
#2
[Remove] BR3x6 (x2)
B
DETAIL A
#1 [Remove] BR3x10
Screw position
FRONT
HHS Label No.2
FRONT
DETAIL B
#1 [Remove] BR3x10 (x2)
シュウコウ⇨
シュウコウ⇨
DETAIL B

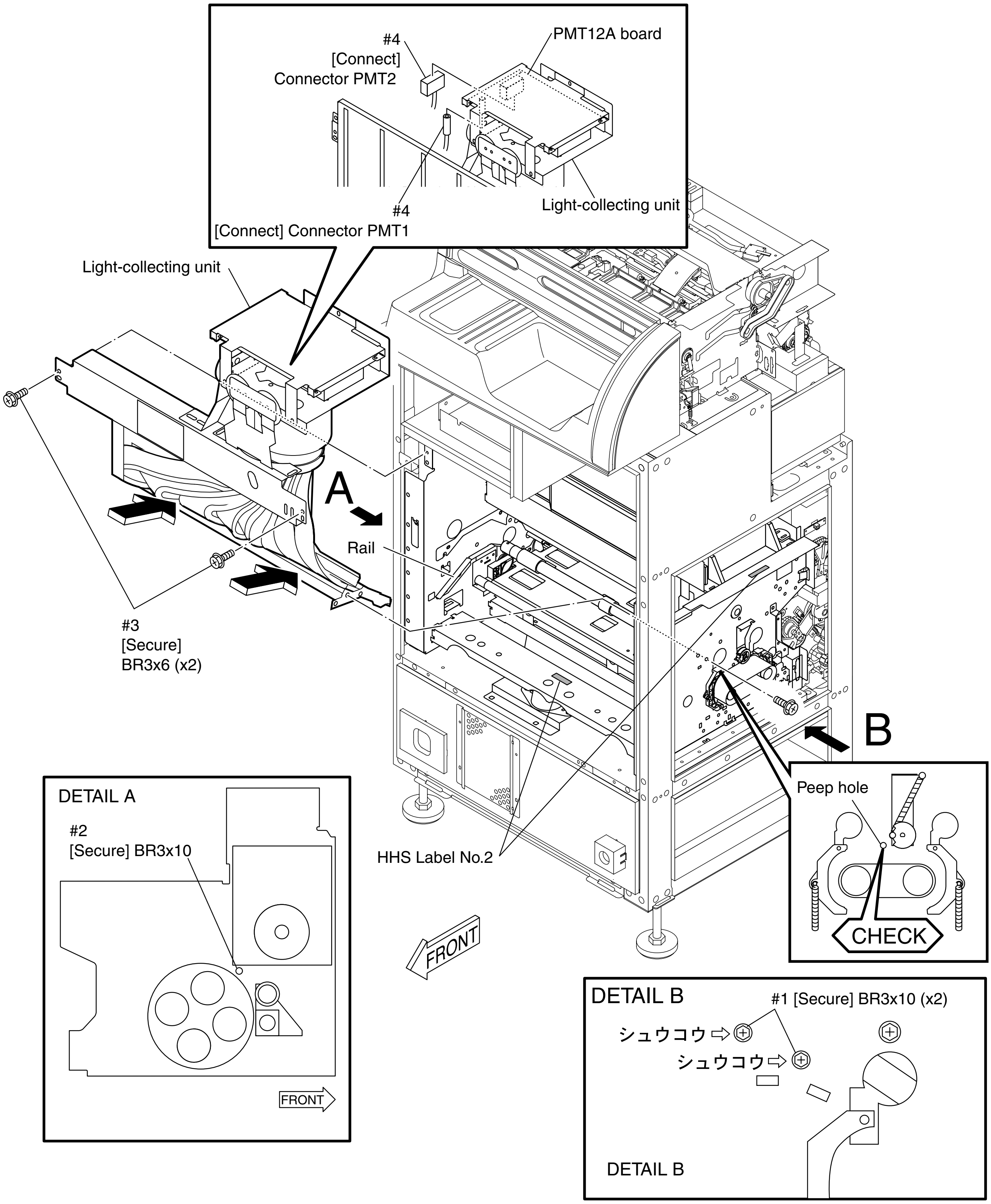
FR6H4801.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the light-collecting unit, mount it along the rail.
When screwing down the light-collecting unit, secure it in place while pushing it in the direction of the arrow as illustrated below.

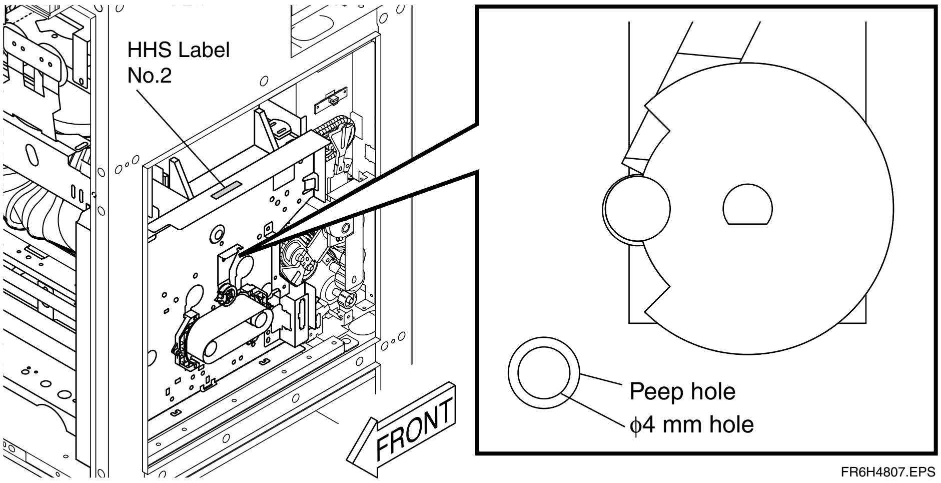
(1) Reinstall the light-collecting unit.


#4
[Connect]
Connector PMT2
PMT12A board
#4
[Connect] Connector PMT1
Light-collecting unit
Light-collecting unit
A
Rail
#3
[Secure]
BR3x6 (x2)
B
Peep hole
CHECK
HHS Label No.2
FRONT
DETAIL A
#2
[Secure] BR3x10
FRONT
DETAIL B
#1 [Secure] BR3x10 (x2)
シュウコウ⇨
シュウコウ⇨
DETAIL B

FR6H4802.EPS

■ Check/Adjustment Procedures

(1) While looking into the peep hole, verify that the ϕ4 mm hole is visible.


HHS Label No.2
FRONT
Peep hole
ϕ4 mm hole
FR6H4807.EPS

◆ *INSTRUCTION* ◆

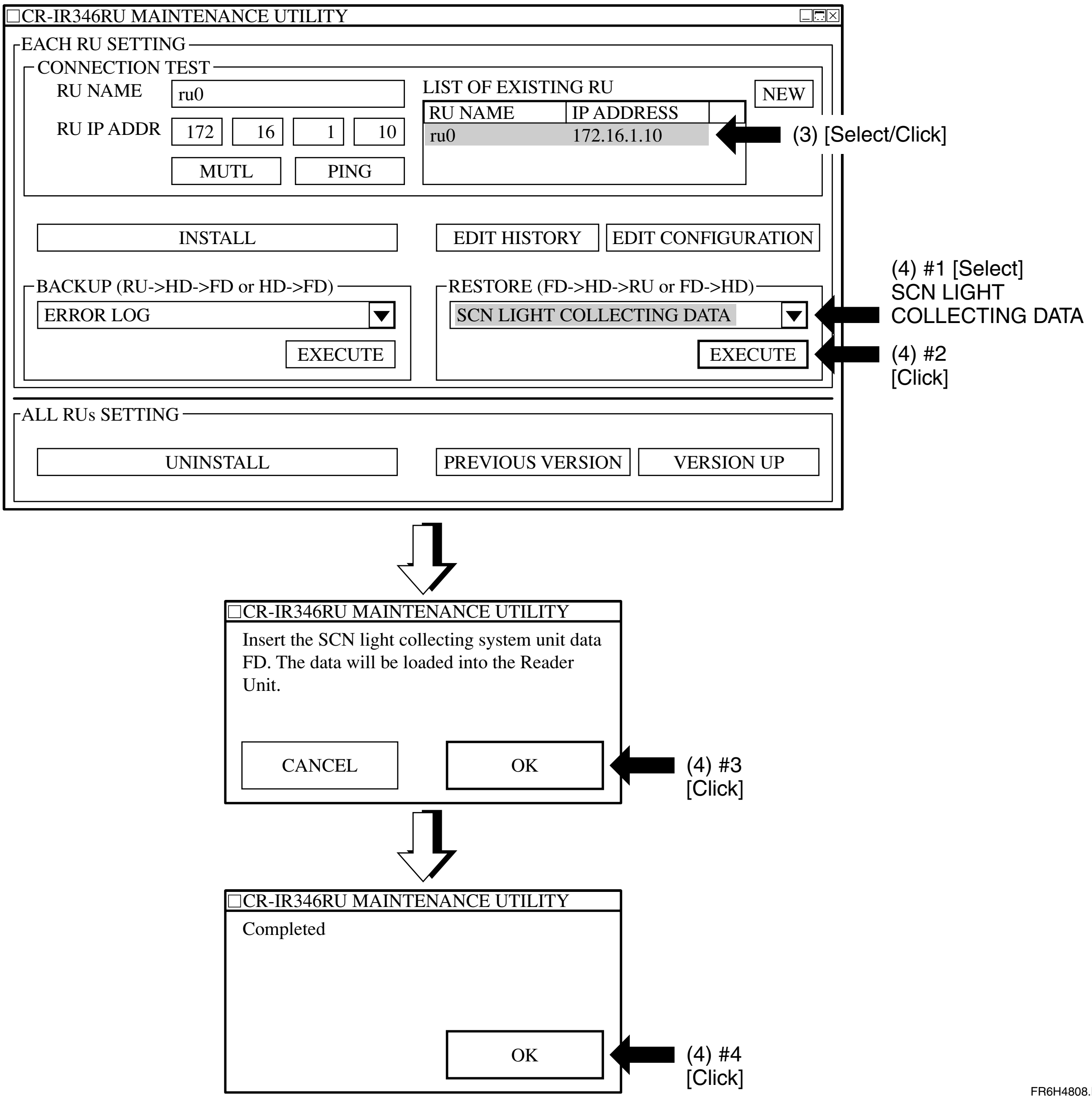
When the light-collecting unit is replaced with a new one, it is necessary to install the machine-specific data bundled therewith.
Take the following steps to install the machine-specific data.

(2) Set a machine-specific data floppy diskette into the FD drive.

(3) Open the CR-IR346RU MAINTENANCE UTILITY window and select the relevant RU from [LIST OF EXISTING RU].

(4) Install the machine-specific data for the light-collecting unit.

MAINTENANCE UTILITY window



☐CR-IR346RU MAINTENANCE UTILITY

EACH RU SETTING

CONNECTION TEST

RU NAME: ru0

RU IP ADDR: 172 16 1 10

LIST OF EXISTING RU

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD or HD->FD): ERROR LOG

RESTORE (FD->HD->RU or FD->HD): SCN LIGHT COLLECTING DATA

ALL RUs SETTING

MUTL
PING
NEW
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
EXECUTE
EXECUTE
UNINSTALL
PREVIOUS VERSION
VERSION UP

(3) [Select/Click]

(4) #1 [Select]
SCN LIGHT
COLLECTING DATA

(4) #2
[Click]

☐CR-IR346RU MAINTENANCE UTILITY

Insert the SCN light collecting system unit data FD. The data will be loaded into the Reader Unit.

(4) #3
[Click]

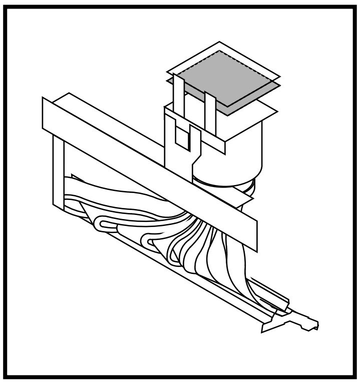
☐CR-IR346RU MAINTENANCE UTILITY

Completed

(4) #4
[Click]

FR6H4808.EPS

9.2 PMT12A Board



FR6H4851.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

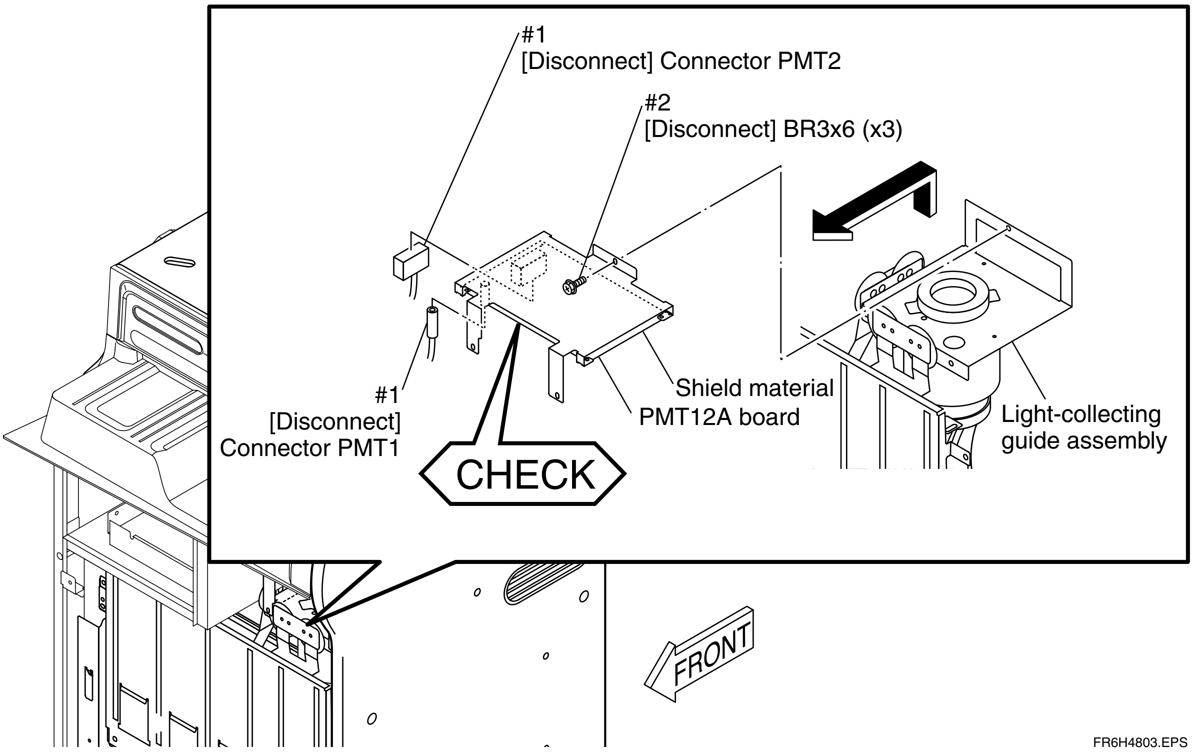
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Top light protect plate

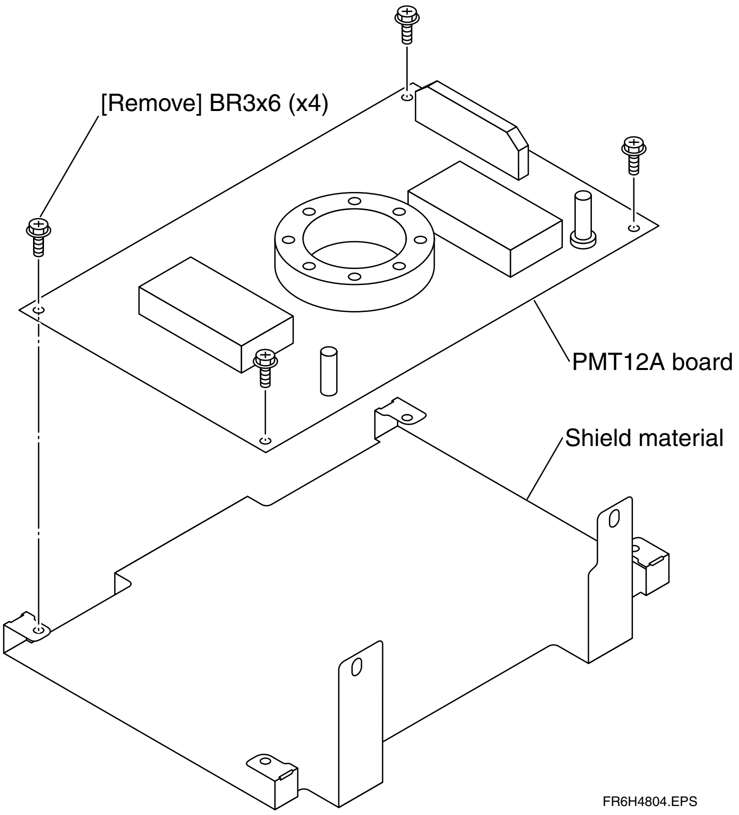
☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the PMT12A board together with the shield material.


#1
[Disconnect] Connector PMT2
#2
[Disconnect] BR3x6 (x3)
#1
[Disconnect]
Connector PMT1
CHECK
Shield material
PMT12A board
Light-collecting
guide assembly
FRONT

FR6H4803.EPS

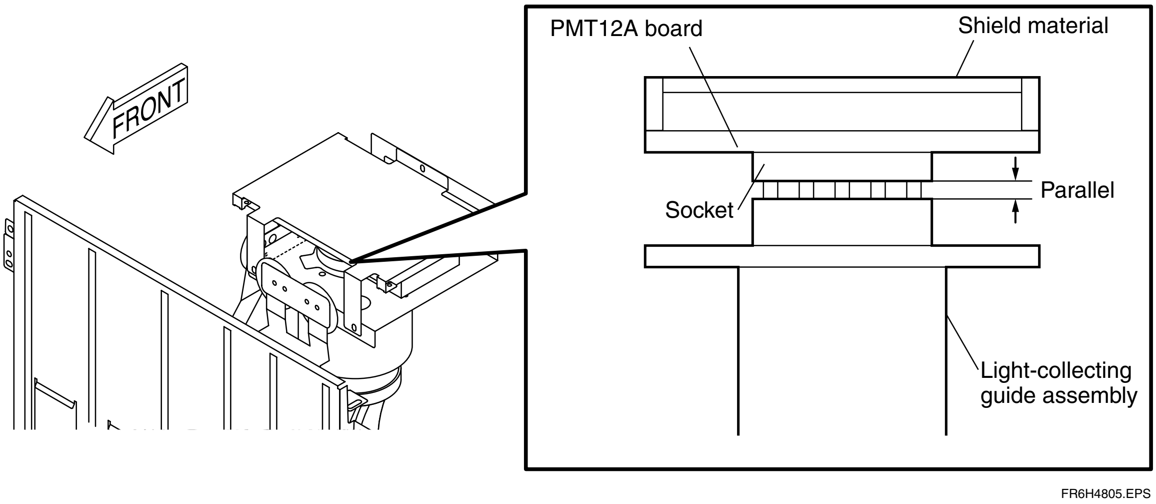
(3) Remove the PMT12A board.


[Remove] BR3x6 (x4)
PMT12A board
Shield material
FR6H4804.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the PMT12A board, together with the shield material, to the light-collecting guide assembly, ensure that the socket of the PMT12A board is parallel to the connector portion of the light-collecting guide assembly.


FRONT
PMT12A board
Shield material
Parallel
Socket
Light-collecting
guide assembly
FR6H4805.EPS

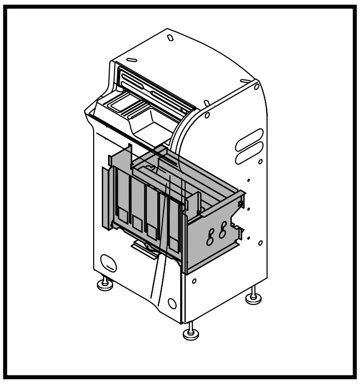
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the light-collecting guide assembly is parallel to the socket of the PMT12A board.

10. Removing and Reinstalling the Subscanning Unit

10.1 Subscanning Unit



FR6H4963.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

☞ "7.1 Side-Positioning Conveyor"

(2) Remove the light-collecting unit.

☞ "9.1 Light-Collecting Unit"

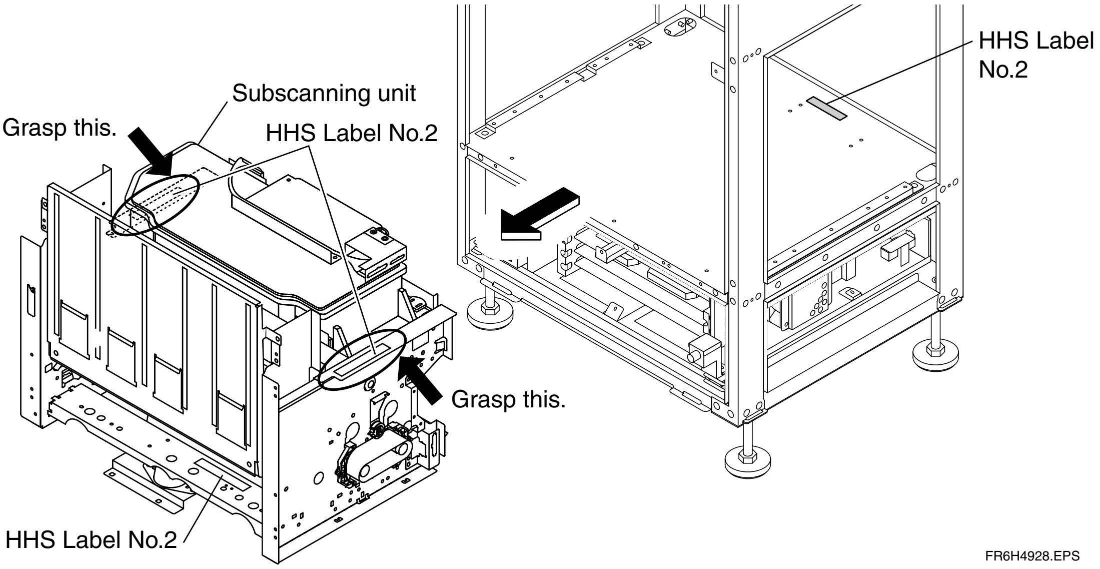
(3) Install the after-reading conveyor cover.

CAUTION

When removing or installing the subscanning unit, exercise due care about your posture to avoid lower-back pain.

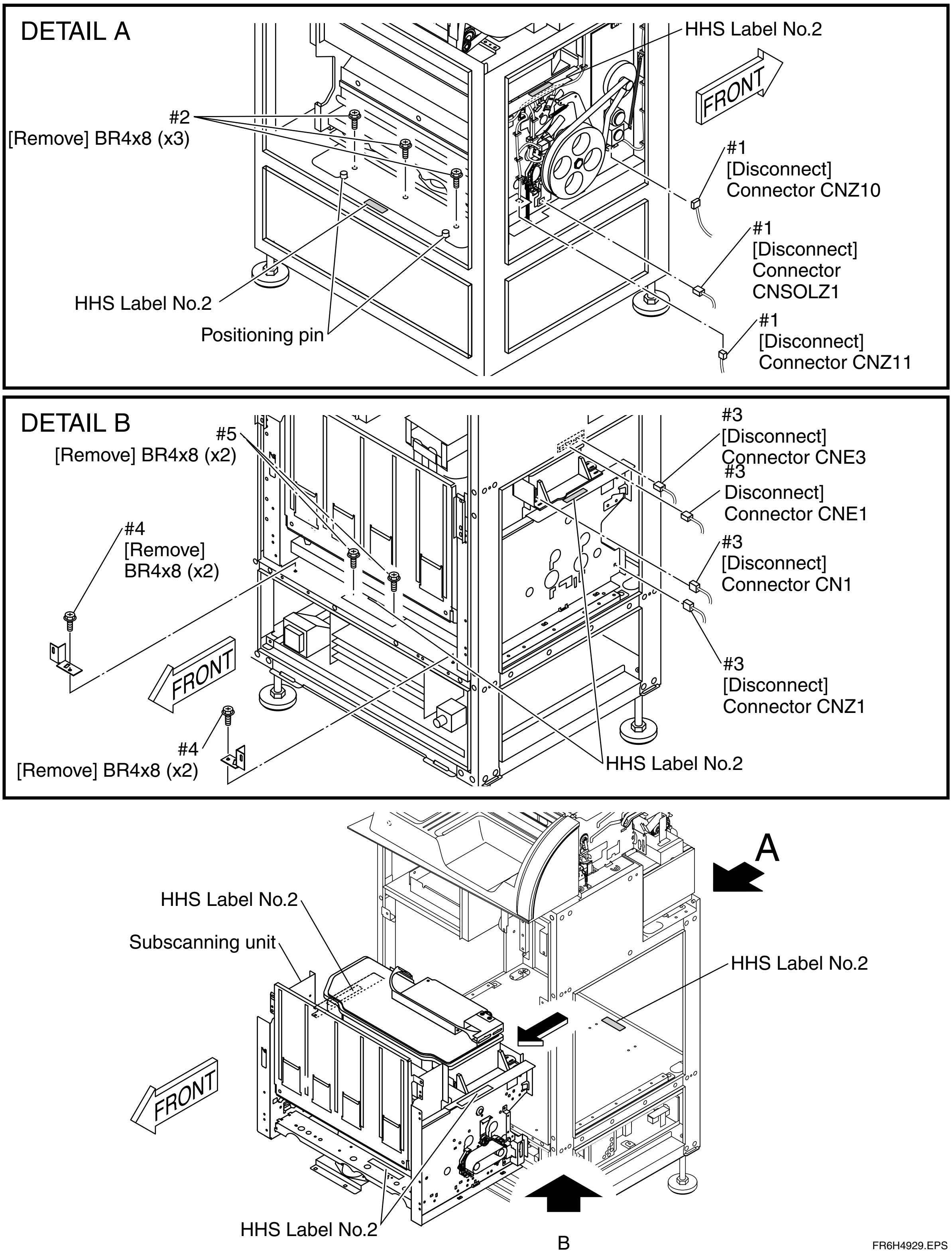
◆ NOTE ◆

When lifting up the subscanning unit, grasp the locations illustrated below.


Subscanning unit
Grasp this.
HHS Label No.2
Grasp this.
HHS Label No.2
HHS Label No.2

FR6H4928.EPS

(4) Remove the subscanning unit.


DETAIL A
HHS Label No.2
FRONT
#2
[Remove] BR4x8 (x3)
#1
[Disconnect]
Connector CNZ10
#1
[Disconnect]
Connector
CNSOLZ1
HHS Label No.2
Positioning pin
#1
[Disconnect]
Connector CNZ11
DETAIL B
#5
[Remove] BR4x8 (x2)
#3
[Disconnect]
Connector CNE3
#3
Disconnect]
Connector CNE1
#4
[Remove]
BR4x8 (x2)
#3
[Disconnect]
Connector CN1
FRONT
#3
[Disconnect]
Connector CNZ1
#4
[Remove] BR4x8 (x2)
HHS Label No.2
A
HHS Label No.2
Subscanning unit
HHS Label No.2
FRONT
HHS Label No.2
B
FR6H4929.EPS

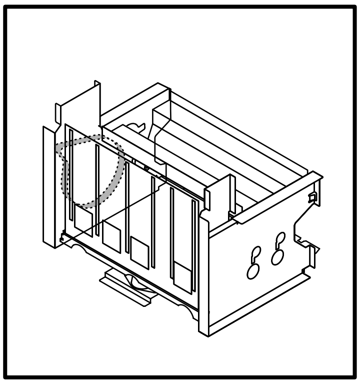
■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

While aligning the subscanning against the positioning pins, secure it in place.

For reinstallation, reverse the removal steps.

10.2 Kapton® Belt



FR6H4951.EPS

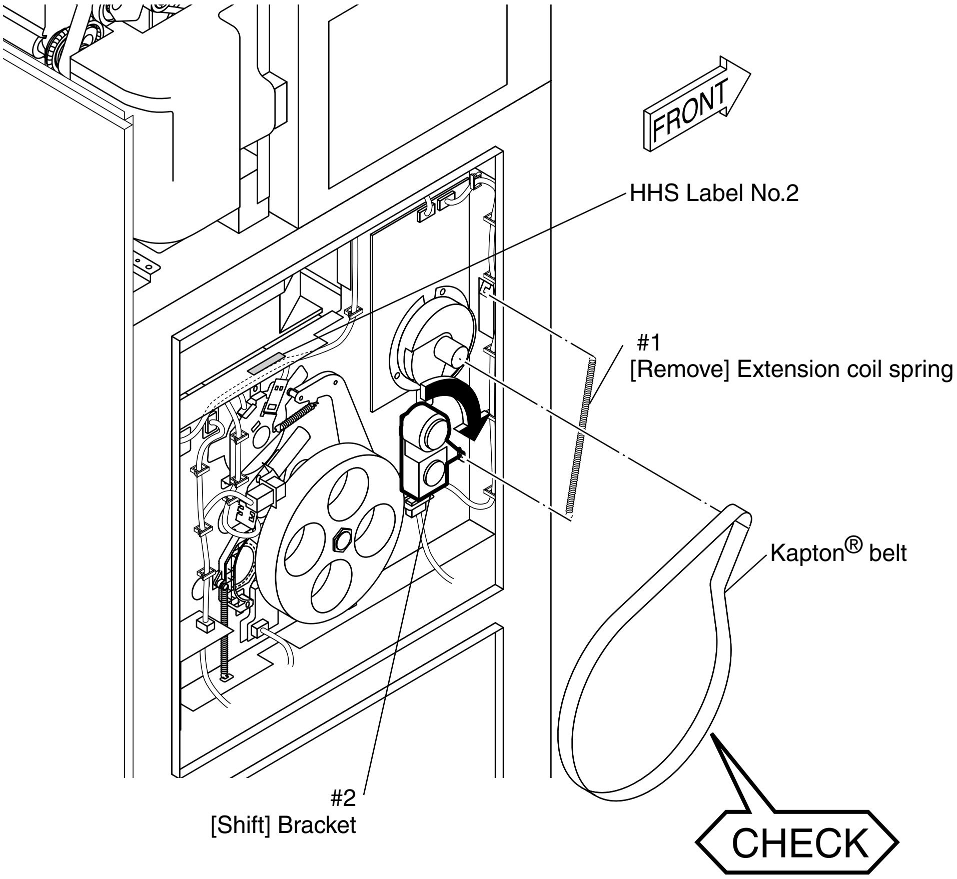
■ Removal Procedures

(1) Remove the covers.

- Front cover
- Left-hand side cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the Kapton® belt.



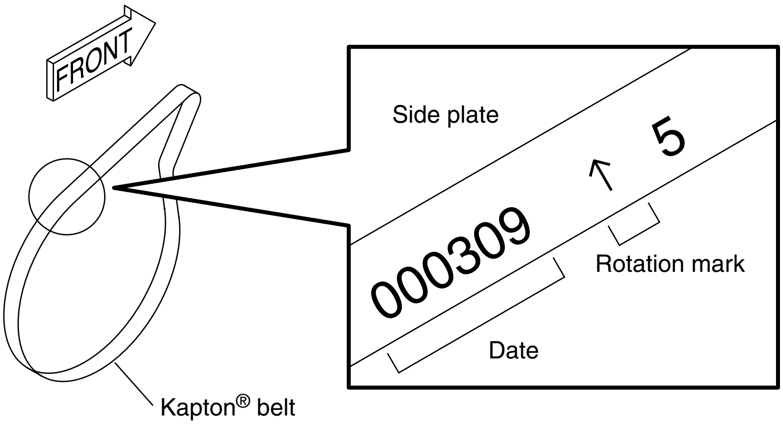
FRONT
HHS Label No.2
#1
[Remove] Extension coil spring
Kapton® belt
#2
[Shift] Bracket
CHECK

FR6H4901.EPS

■ Reinstallation Procedures

◆ *INSTRUCTIONS* ◆

- *The Kapton® belt should be mounted with its date indicating side up, so that the arrow mark faces the side plate.*
- *After mounting the Kapton® belt, manually rotate the flywheel to verify that the Kapton® belt does not come off.*



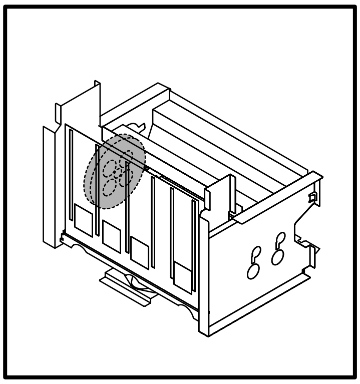
FR6H4902.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the Kapton® belt has been mounted in a proper orientation.
- Manually rotate the flywheel to verify that the Kapton® belt does not come off.

10.3 Flywheel



FR6H4952.EPS

■ Removal Procedures

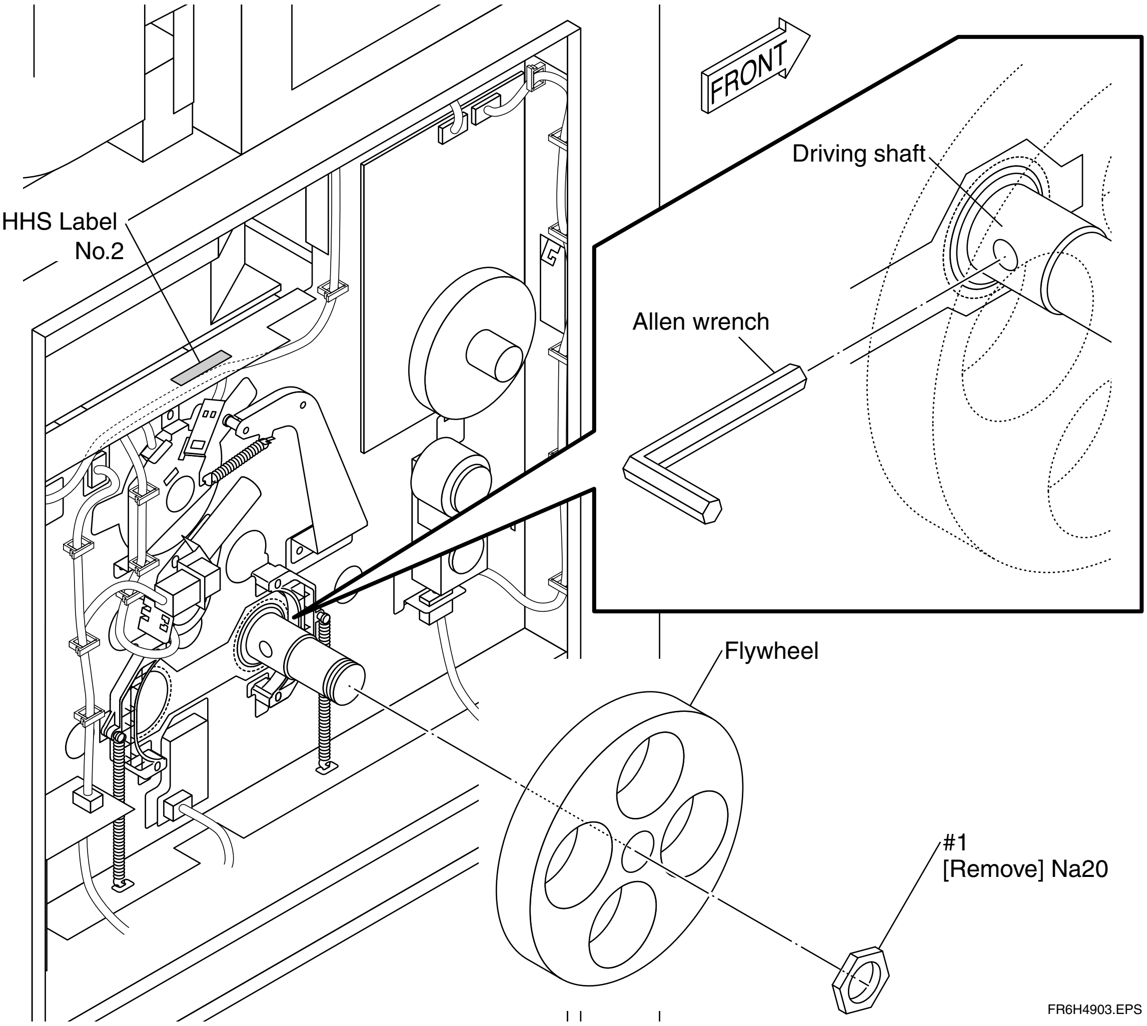
(1) Remove the Kapton® belt.

☞ "10.2 Kapton® Belt"

◆ NOTE ◆

Insert an Allen wrench into the hole of the driving shaft to secure the shaft in place, and then remove the nut.

(2) Remove the flywheel.



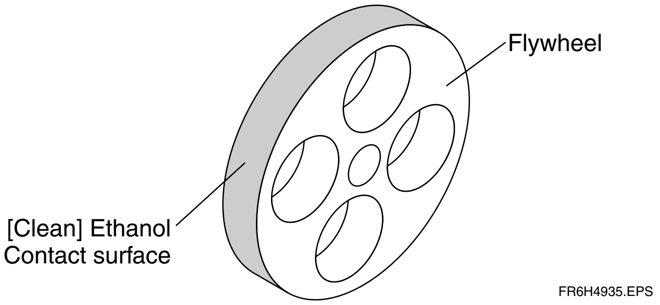
FRONT
Driving shaft
HHS Label No.2
Allen wrench
Flywheel
#1
[Remove] Na20

FR6H4903.EPS

■ Reinstallation Procedures

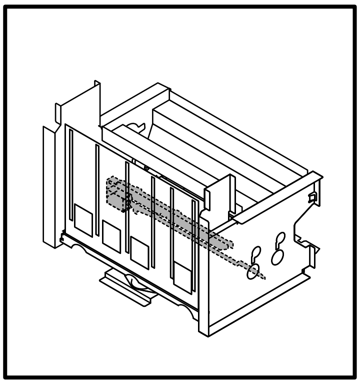
◆ *NOTES* ◆

- *Use care not to damage the surface in contact with the Kapton® belt.*
- *Before reinstalling the flywheel, clean the Kapton® belt contacting surface with ethanol.*


Flywheel
[Clean] Ethanol
Contact surface
FR6H4935.EPS

For reinstallation, reverse the removal steps.

10.4 Solenoid (SolZ1)



FR6H4959.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

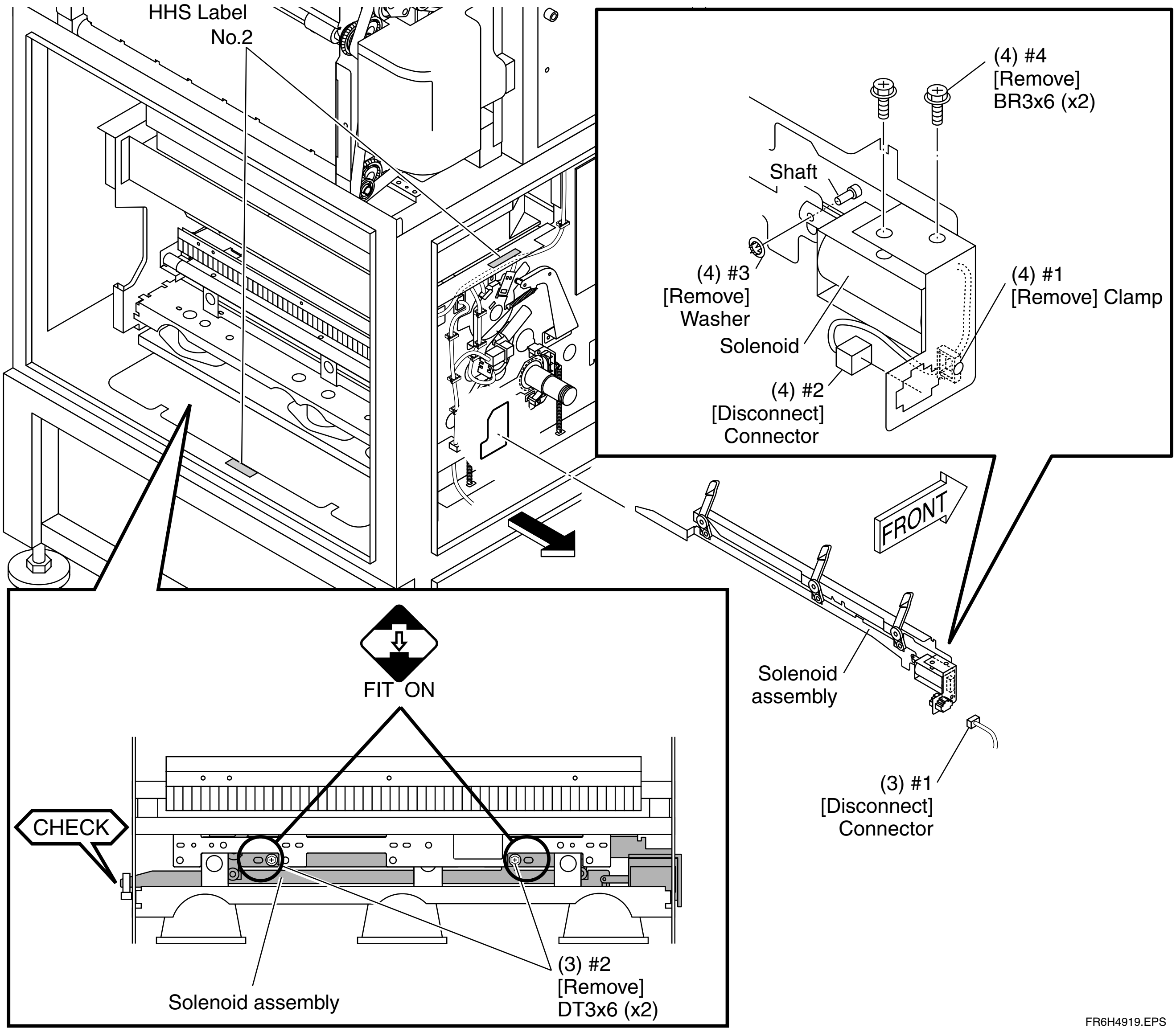
☞ “7.1 Side-Positioning Conveyor”

(2) Remove the flywheel.

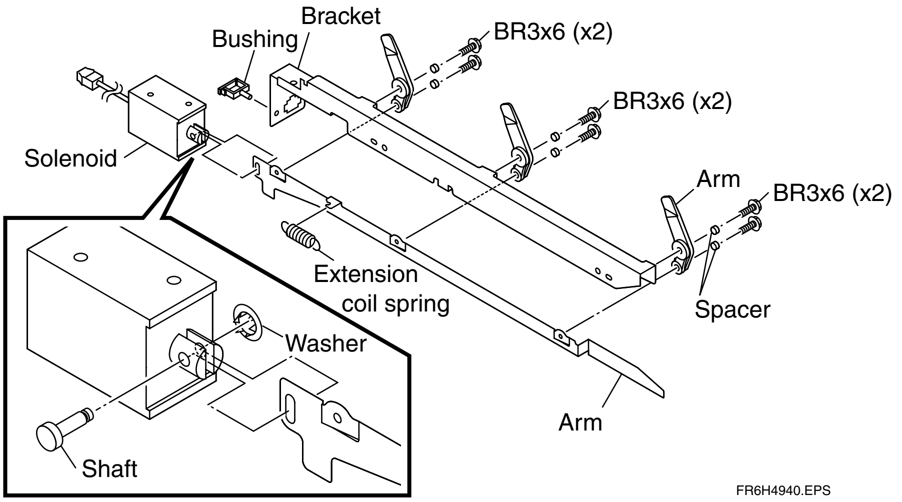
☞ “10.3 Flywheel”

(3) Remove the solenoid assembly.

(4) Remove the solenoid.


HHS Label
No.2
(4) #4
[Remove]
BR3x6 (x2)
Shaft
(4) #3
[Remove]
Washer
Solenoid
(4) #1
[Remove] Clamp
(4) #2
[Disconnect]
Connector
FRONT
Solenoid
assembly
(3) #1
[Disconnect]
Connector
FIT ON
CHECK
Solenoid assembly
(3) #2
[Remove]
DT3x6 (x2)
FR6H4919.EPS

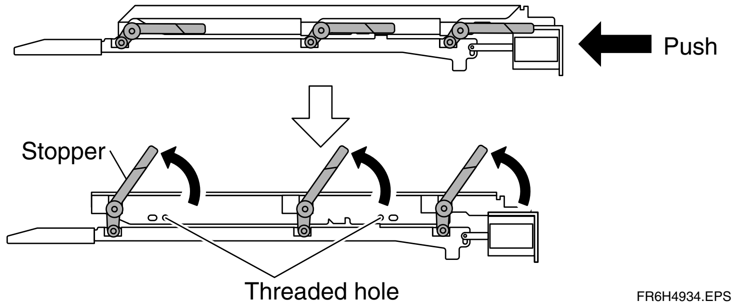
■ Exploded View


Bracket
Bushing
BR3x6 (x2)
BR3x6 (x2)
Solenoid
Arm
BR3x6 (x2)
Extension
coil spring
Spacer
Washer
Arm
Shaft
FR6H4940.EPS

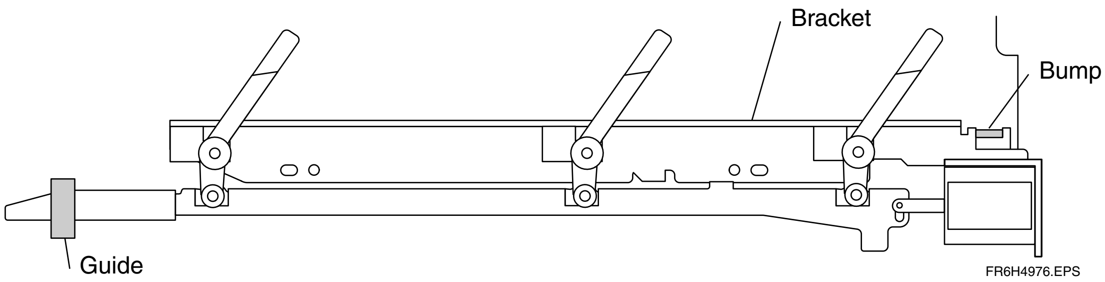
■ Reinstallation Procedures

◆ NOTES ◆

- *When installing the solenoid assembly, raise the stoppers to gain access to the threaded holes.*


Push
Stopper
Threaded hole
FR6H4934.EPS

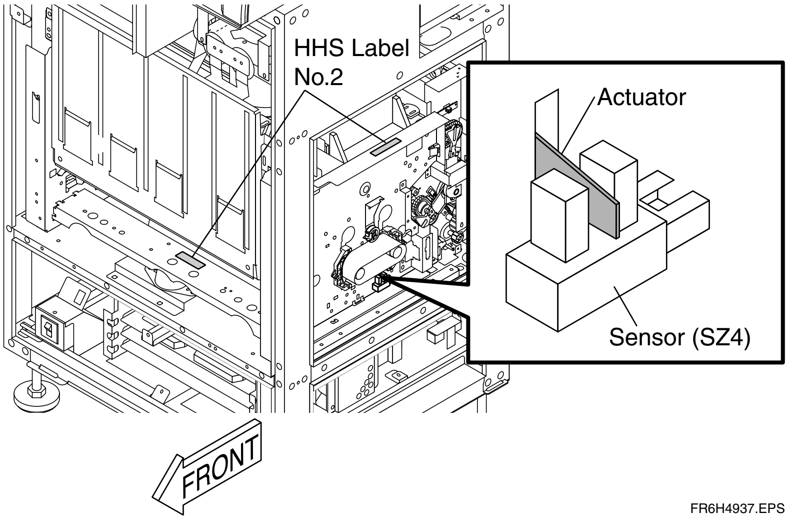
- *Make sure that the tip of the arm extends through the guide, and push the bracket of the solenoid assembly against the bump to screw it down.*


Bracket
Bump
Guide
FR6H4976.EPS

For reinstallation, reverse the removal steps.

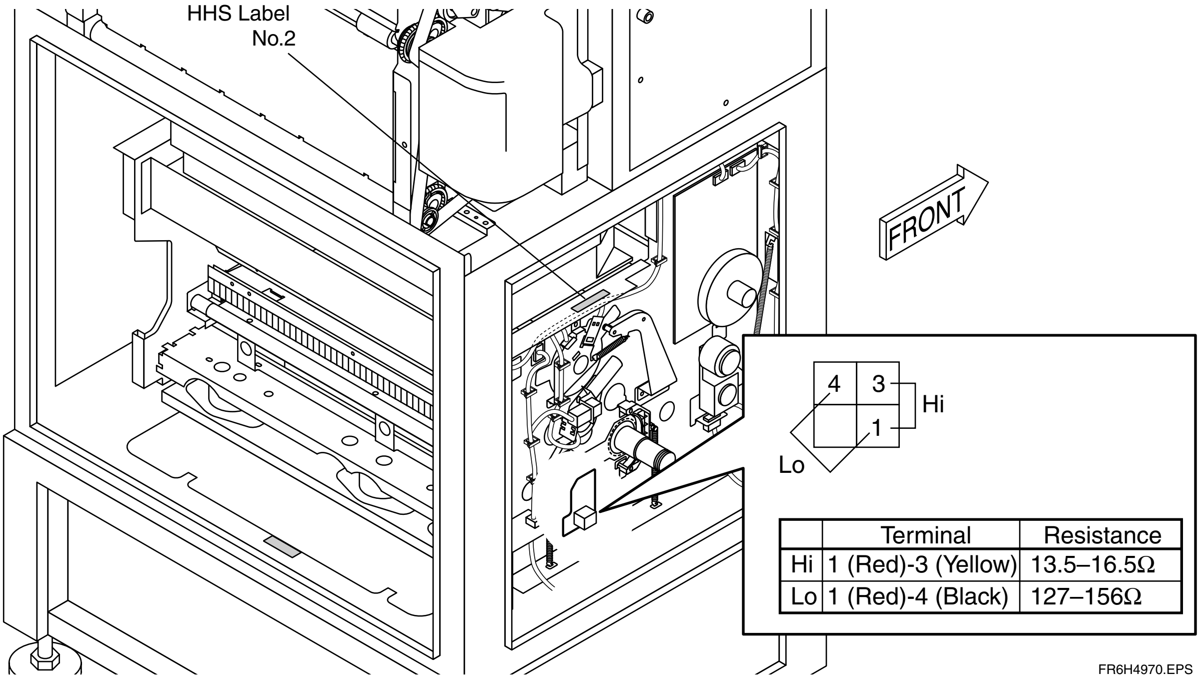
■ Check/Adjustment Procedures

- Make sure that the actuator of the solenoid assembly blocks the light path of the sensor (SZ4).


HHS Label
No.2
Actuator
Sensor (SZ4)
FRONT

FR6H4937.EPS

- Measure the resistance value at the connector terminal of the solenoid to verify that the voltage is correct.


HHS Label
No.2
FRONT
4
3
1
Hi
Lo

	Terminal	Resistance
Hi	1 (Red)-3 (Yellow)	13.5–16.5Ω
Lo	1 (Red)-4 (Black)	127–156Ω

FR6H4970.EPS

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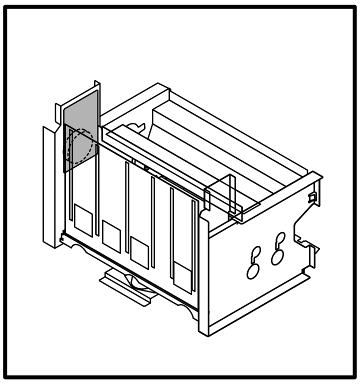
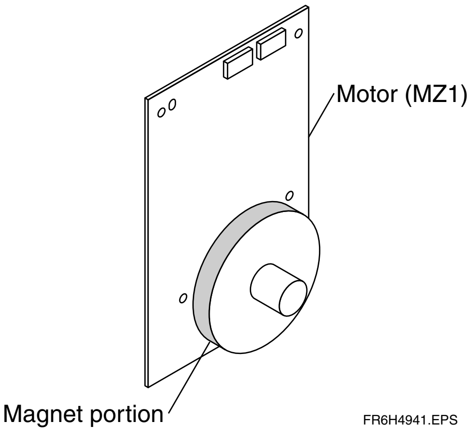
10.5 Motor (MZ1)



FR6H4964.EPS

CAUTIONS

- *When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.*
- *When removing or installing the motor (MZ1), do not use any magnet screwdriver.*
- *Do not touch the magnet portion of the motor (MZ1).*



FR6H4941.EPS

◇ REFERENCE ◇

The screws that retain the motor (MZ1) have different lengths depending on the version of the light-collecting guide assembly.
Light-collecting guide assembly 606Y0055 (#20669 or earlier): BR3x6 (x5)
Light-collecting guide assembly 606Y0055A (#20670 or later): BR3x10 (x5)

■ Removal Procedures

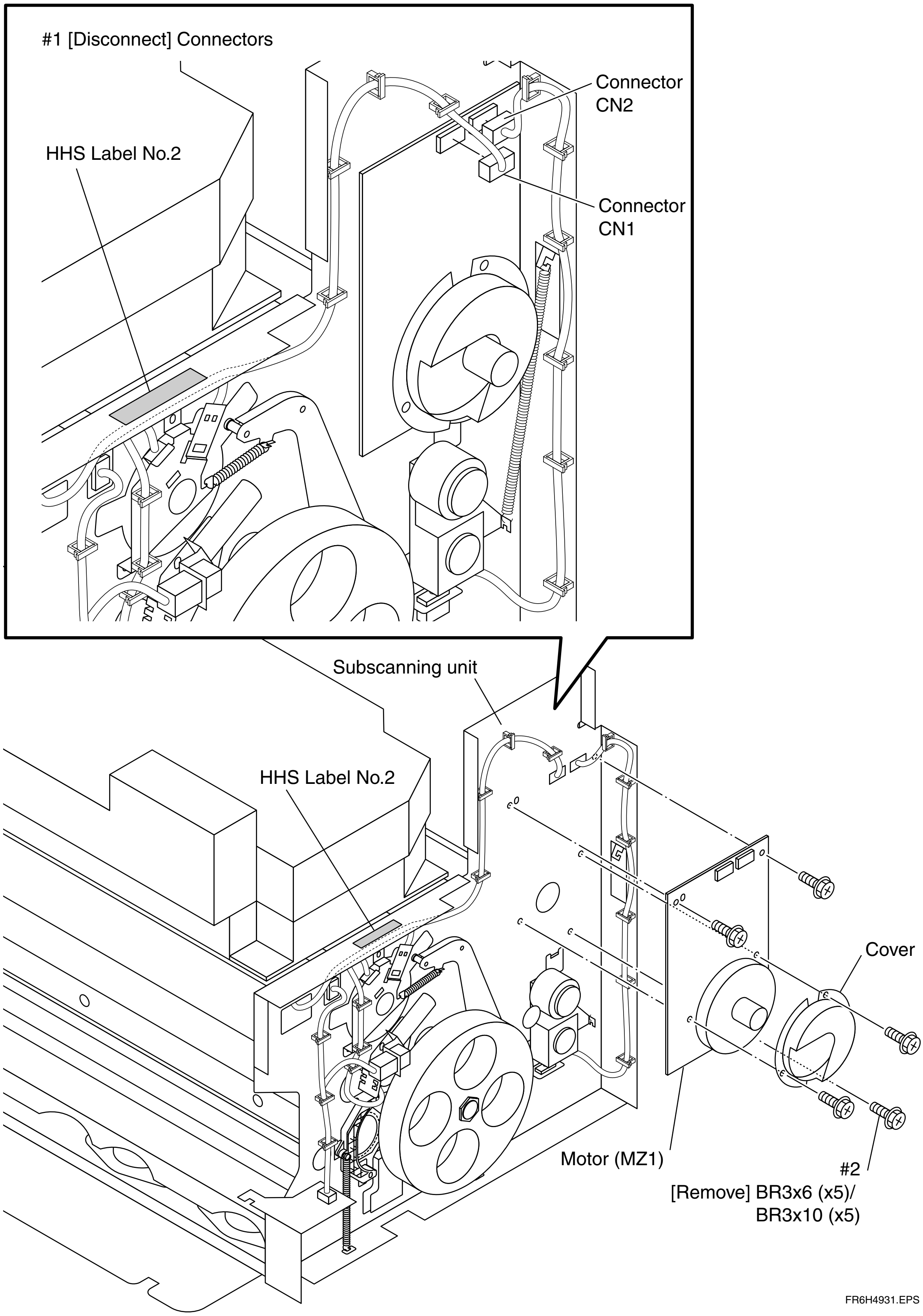
(1) Remove the subscanning unit.

☞ “10.1 Subscanning Unit”

(2) Remove the Kapton® belt.

☞ “10.2 Kapton® Belt”

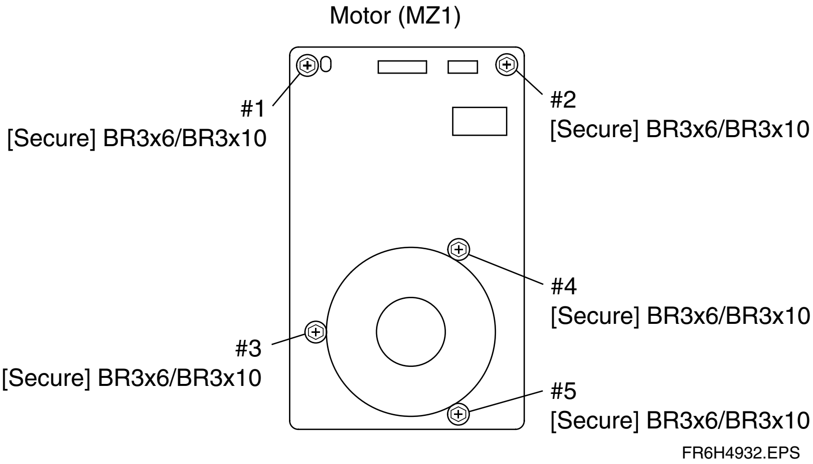
(3) Remove the motor (MZ1).


#1 [Disconnect] Connectors
HHS Label No.2
Connector CN2
Connector CN1
Subscanning unit
HHS Label No.2
Cover
Motor (MZ1)
#2
[Remove] BR3x6 (x5)/
BR3x10 (x5)
FR6H4931.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the motor (MZ1), loosely tighten the five screws and then securely tighten them in order illustrated below.


Motor (MZ1)
#1
[Secure] BR3x6/BR3x10
#2
[Secure] BR3x6/BR3x10
#4
[Secure] BR3x6/BR3x10
#3
[Secure] BR3x6/BR3x10
#5
[Secure] BR3x6/BR3x10
FR6H4932.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

If the motor is replaced, perform the following check procedures.

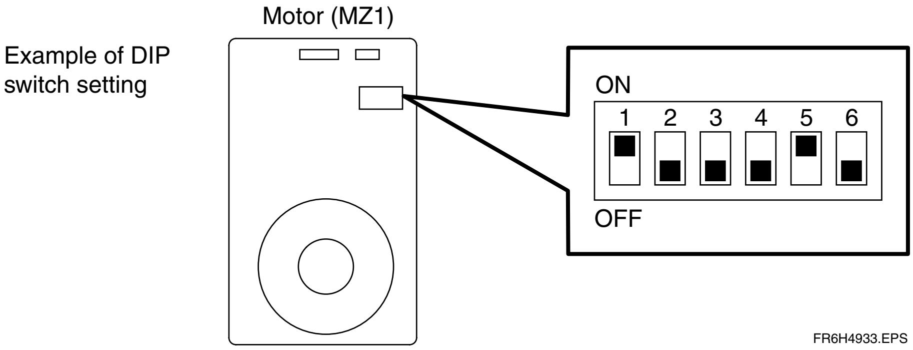
- DIP switch setting
- Preparation for output image (exposure)
- Subscan length check

If subscan length adjustments are needed, make subscan length adjustments as appropriate with reference to the DIP Switch Setting List (Table 1).

- Subscan length adjustment

● DIP switch setting

(1) Check the DIP switch setting before replacement, and make the same setting.


Motor (MZ1)
Example of DIP switch setting
ON
1
2
3
4
5
6
OFF
FR6H4933.EPS

● Preparation for output image (exposure)

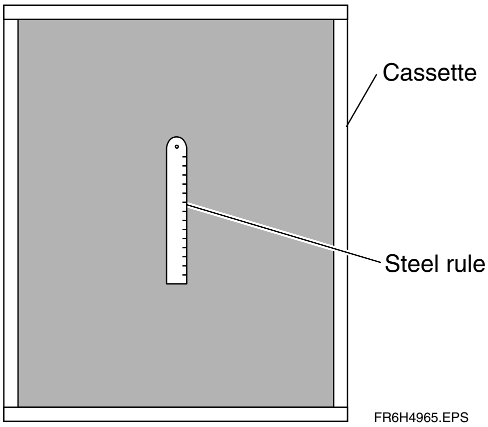
(1) Perform primary erasure on the IP to be used for subscan length check.

☞ "RU Instruction Manual/2.4 When Only Image Erasure is to be Performed (Primary Erasure)"

◆ NOTES ◆

- *The IP type to be used should be the VI type.*
- *Make sure that no important image data has been exposed on the IP to be used.*

(2) Place a steel rule and expose it at 1 mR.



◇ REFERENCE ◇

If the IP cannot be exposed at 1 mR, it should be exposed at 1 mR, with reference to the following exposure conditions.
Note, however, that those conditions are for standard IP setup reference.

Distance:	*1.8 m*
Voltage:	*80 kV*
Amperage:	*50 mA*
Time:	*0.013 sec*

● Subscan length check

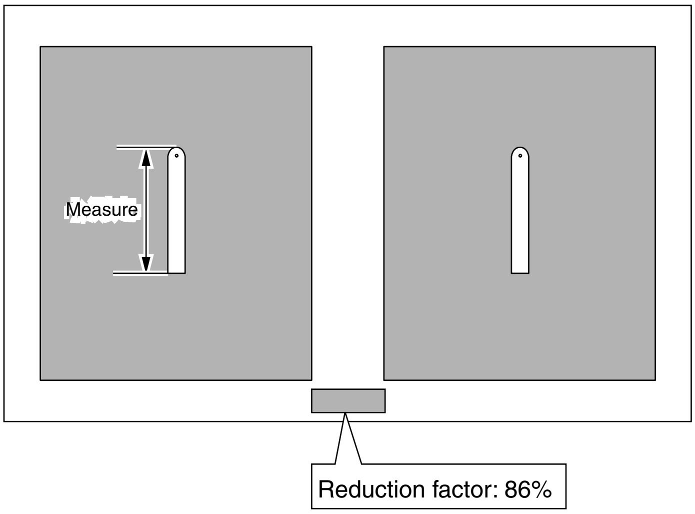
(1) Output the image exposed at 1 mR.

CL exposure menu selection screen: [TEST] [Image Format]

☞ "RU Instruction Manual/2. Operating Procedures"

(2) Calculate the length (theoretical value) of the steel rule on the film.

Example of reduction factor indication:



Formula: Length (theoretical value) of the steel rule on the film = Length of the steel rule x reduction factor

Example of calculation: 175 mm x 0.86 (86% reduction factor) = 150.5 mm

FR6H4966.EPS

(3) Calculate the allowable value of the subscan length.

Formula: Allowable value of the subscan length = Length of the steel rule (theoretical value) x specified value (±0.6%)

Example of calculation: 150.5 mm x 0.006 (±0.6%) = ±0.9 mm

⬇

149.6 mm ≤ Allowable value ≤ 151.4 mm

FR6H4968.EPS

(4) Measure the length of the steel rule (actual measurement) of the calipers on the output film, and verify that it is within the allowable value calculated.

149.6 mm ≤ Actual measurement ≤ 151.4 mm

◆ NOTE ◆

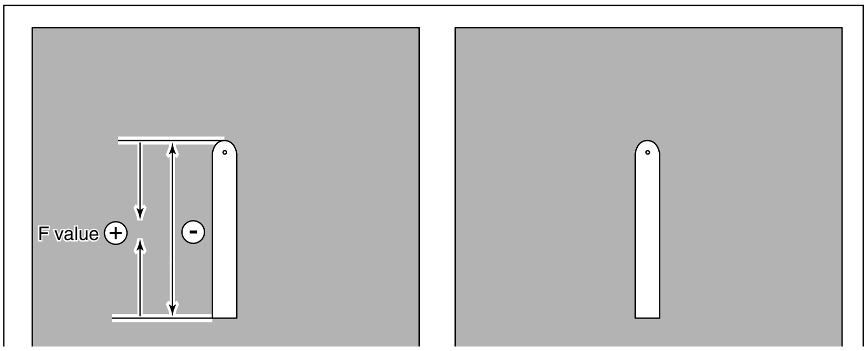
If the subscan length is beyond the allowable value, make subscan length adjustments (i.e., change the DIP switch setting), as appropriate.

● Subscan length adjustment

(1) With reference to the DIP Switch Setting List (Table 1), change the DIP switch setting.

◇ *REFERENCE* ◇

Changing the “speed fine-adjustment setup factor” in the positive (+) direction will cause the F value to decrease, while changing it in the negative (-) direction will cause the F value to increase.



FR6H4967.EPS

DIP Switch Setting List (Table 1)

0: Switch ON, 1: Switch OFF

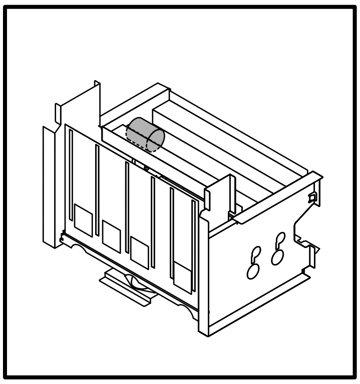
Switch						Speed fine-adjustment setup factor (%)
S6	S5	S4	S3	S2	S1	
0	0	0	1	1	0	-1.6
1	0	0	1	1	0	-1.5
0	1	0	1	1	0	-1.4
1	1	0	1	1	0	-1.3
0	0	1	1	1	0	-1.2
1	0	1	1	1	0	-1.1
0	1	1	1	1	0	-1.0
1	1	1	1	1	0	-0.9
0	0	0	0	0	1	-0.8
1	0	0	0	0	1	-0.7
0	1	0	0	0	1	-0.6
1	1	0	0	0	1	-0.5
0	0	1	0	0	1	-0.4
1	0	1	0	0	1	-0.3
0	1	1	0	0	1	-0.2
1	1	1	0	0	1	-0.1
0	0	0	1	0	1	0
1	0	0	1	0	1	+0.1
0	1	0	1	0	1	+0.2
1	1	0	1	0	1	+0.3
0	0	1	1	0	1	+0.4
1	0	1	1	0	1	+0.5
0	1	1	1	0	1	+0.6
1	1	1	1	0	1	+0.7
0	0	0	0	1	1	+0.8
1	0	0	0	1	1	+0.9
0	1	0	0	1	1	+1.0
1	1	0	0	1	1	+1.1
0	0	1	0	1	1	+1.2
1	0	1	0	1	1	+1.3
0	1	1	0	1	1	+1.4
1	1	1	0	1	1	+1.5
0	0	0	1	1	1	+1.6

TR6H4901.EPS

(2) Check the subscan length.

☞ “● Subscan length check”

10.6 Motor (MZ2)



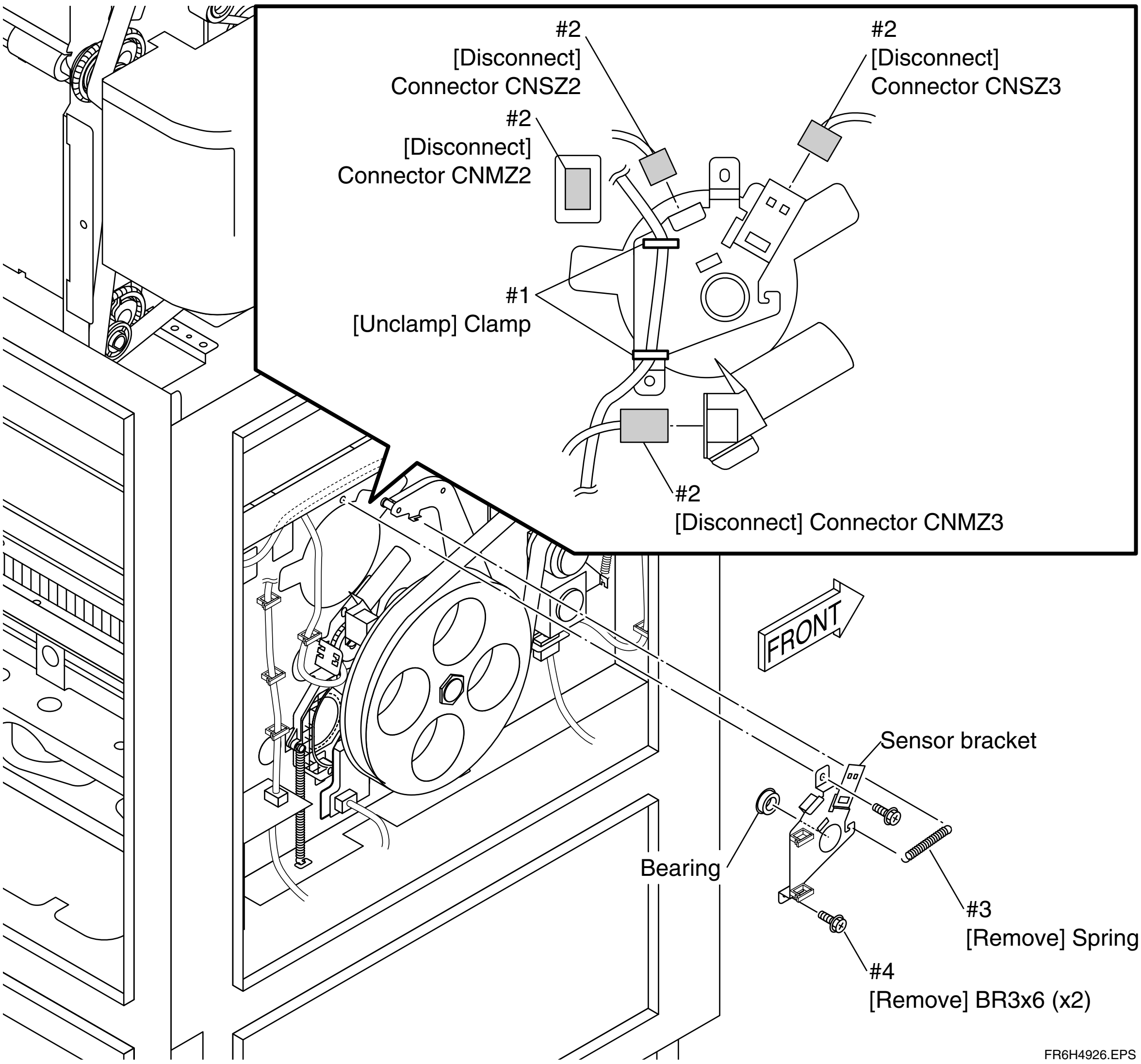
FR6H4962.EPS

■ Removal Procedures

(1) Remove the scanning optics unit.

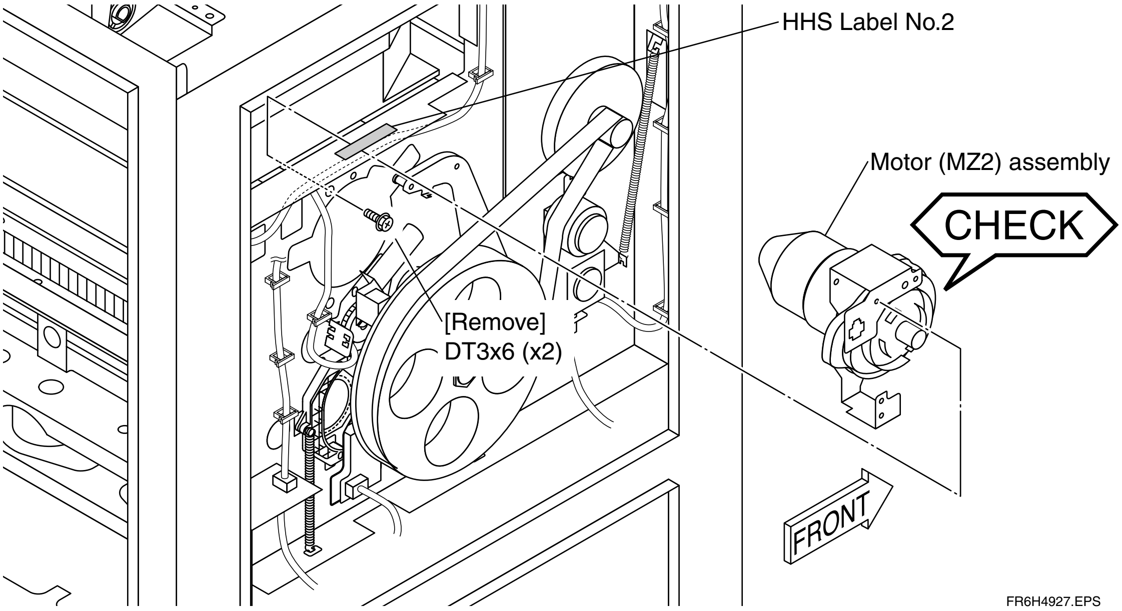
☞ "8.1 Scanning Optics Unit"

(2) Remove the sensor bracket.

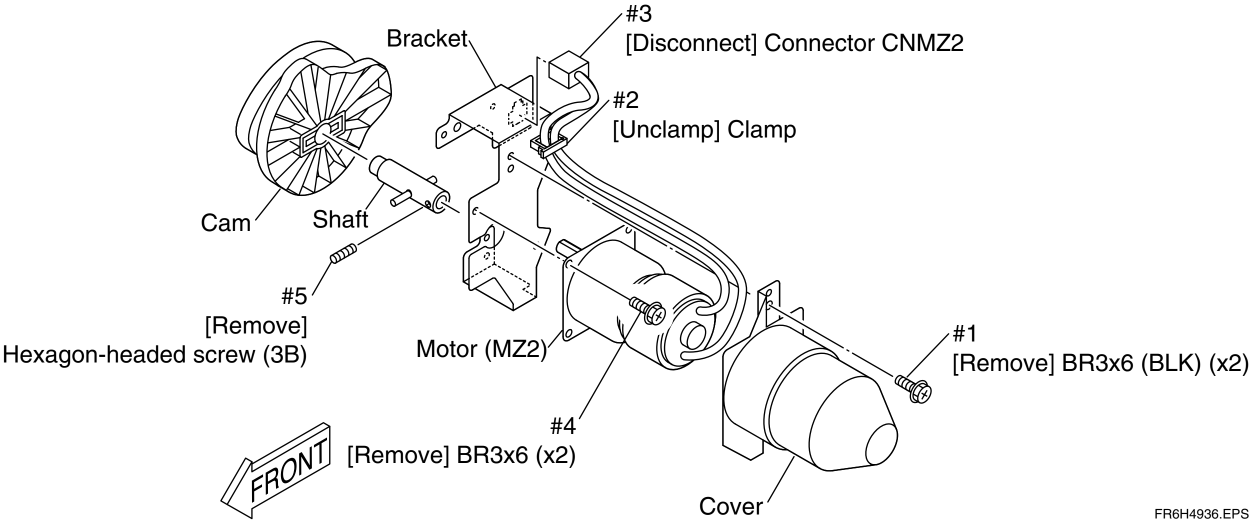

#2
[Disconnect]
Connector CNSZ2
#2
[Disconnect]
Connector CNSZ3
#2
[Disconnect]
Connector CNMZ2
#1
[Unclamp] Clamp
#2
[Disconnect] Connector CNMZ3
FRONT
Sensor bracket
Bearing
#3
[Remove] Spring
#4
[Remove] BR3x6 (x2)

FR6H4926.EPS

(3) Remove the motor (MZ2) assembly.


HHS Label No.2
Motor (MZ2) assembly
CHECK
[Remove]
DT3x6 (x2)
FRONT
FR6H4927.EPS

(4) Remove the motor (MZ2).

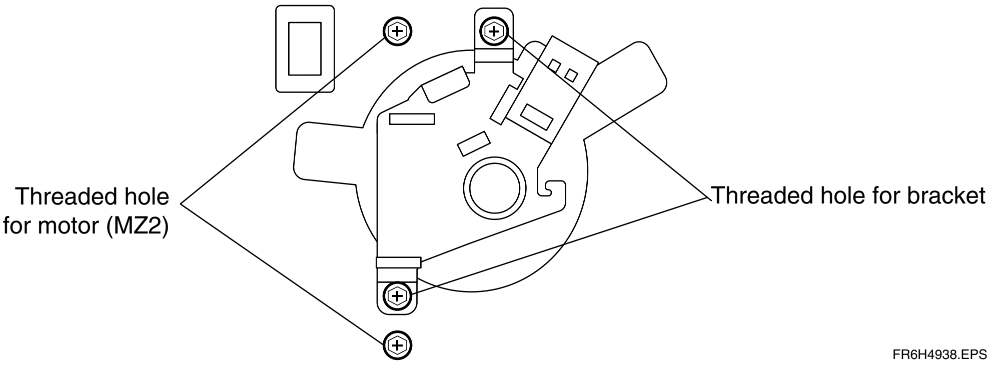

#3
[Disconnect] Connector CNMZ2
Bracket
#2
[Unclamp] Clamp
Cam
Shaft
#5
[Remove]
Hexagon-headed screw (3B)
Motor (MZ2)
#1
[Remove] BR3x6 (BLK) (x2)
#4
[Remove] BR3x6 (x2)
FRONT
Cover
FR6H4936.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

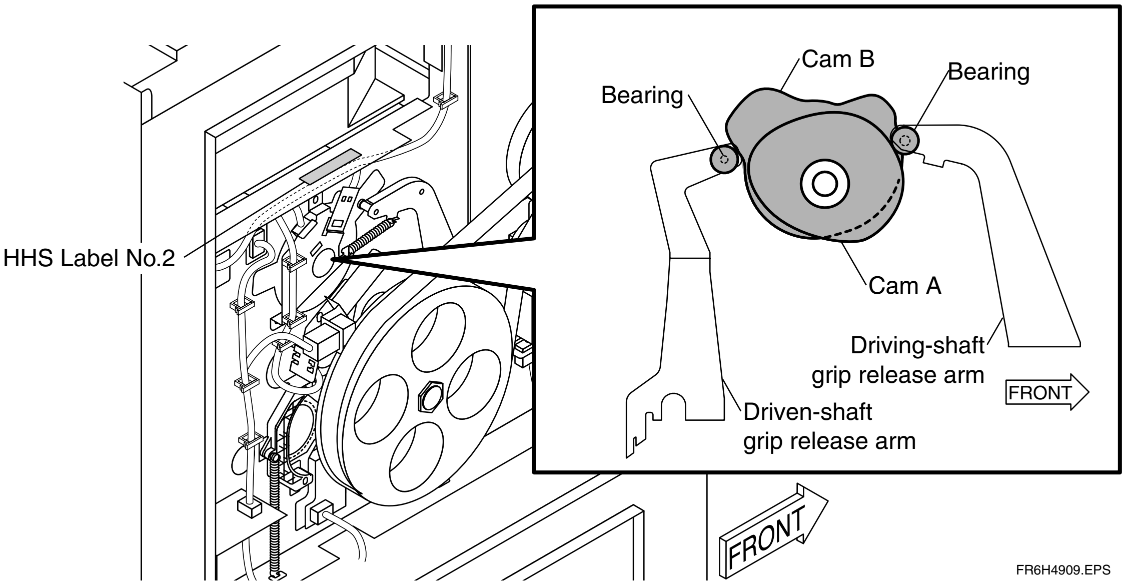
◇ *REFERENCE* ◇

The threaded holes for mounting the motor (MZ2) assembly are adjacent to the threaded holes for mounting the sensor bracket.
With reference to the illustration below, install the motor (MZ2) assembly and sensor bracket as appropriate.


Threaded hole
for motor (MZ2)
Threaded hole for bracket
FR6H4938.EPS

■ Check/Adjustment Procedures

- Make sure that the bearing for the driving-shaft grip release arm is brought into contact with the outer periphery of the cam A and B.


HHS Label No.2
Bearing
Cam B
Bearing
Cam A
Driving-shaft
grip release arm
FRONT
Driven-shaft
grip release arm
FRONT
FR6H4909.EPS

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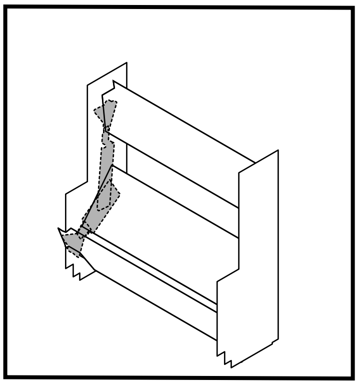
10.7 Motor (MZ3)



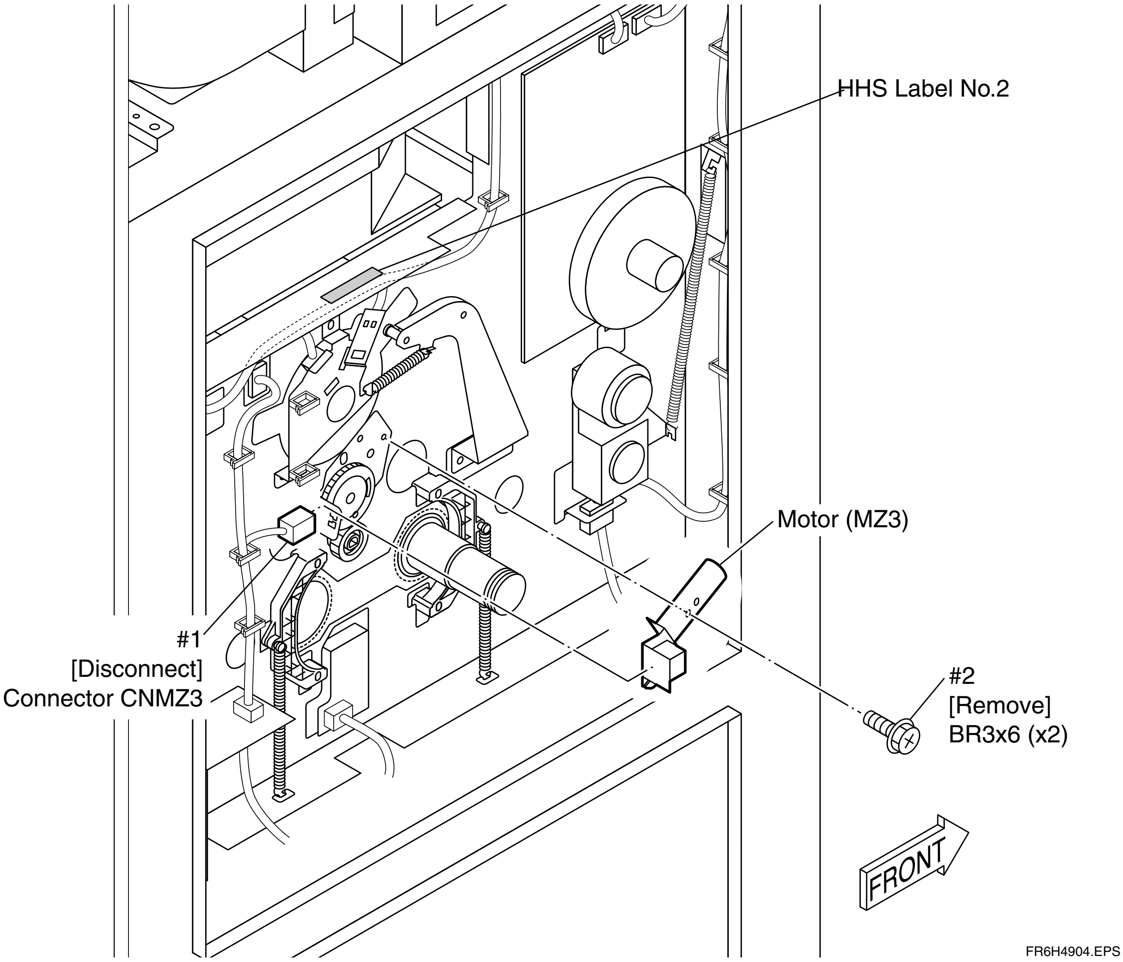
FR6H4653.EPS

■ Removal Procedures

(1) Remove the flywheel.

☞ “10.3 Flywheel”

(2) Remove the motor (MZ3).

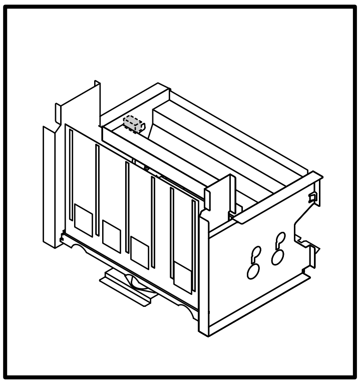

HHS Label No.2
Motor (MZ3)
#1
[Disconnect]
Connector CNMZ3
#2
[Remove]
BR3x6 (x2)
FRONT

FR6H4904.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

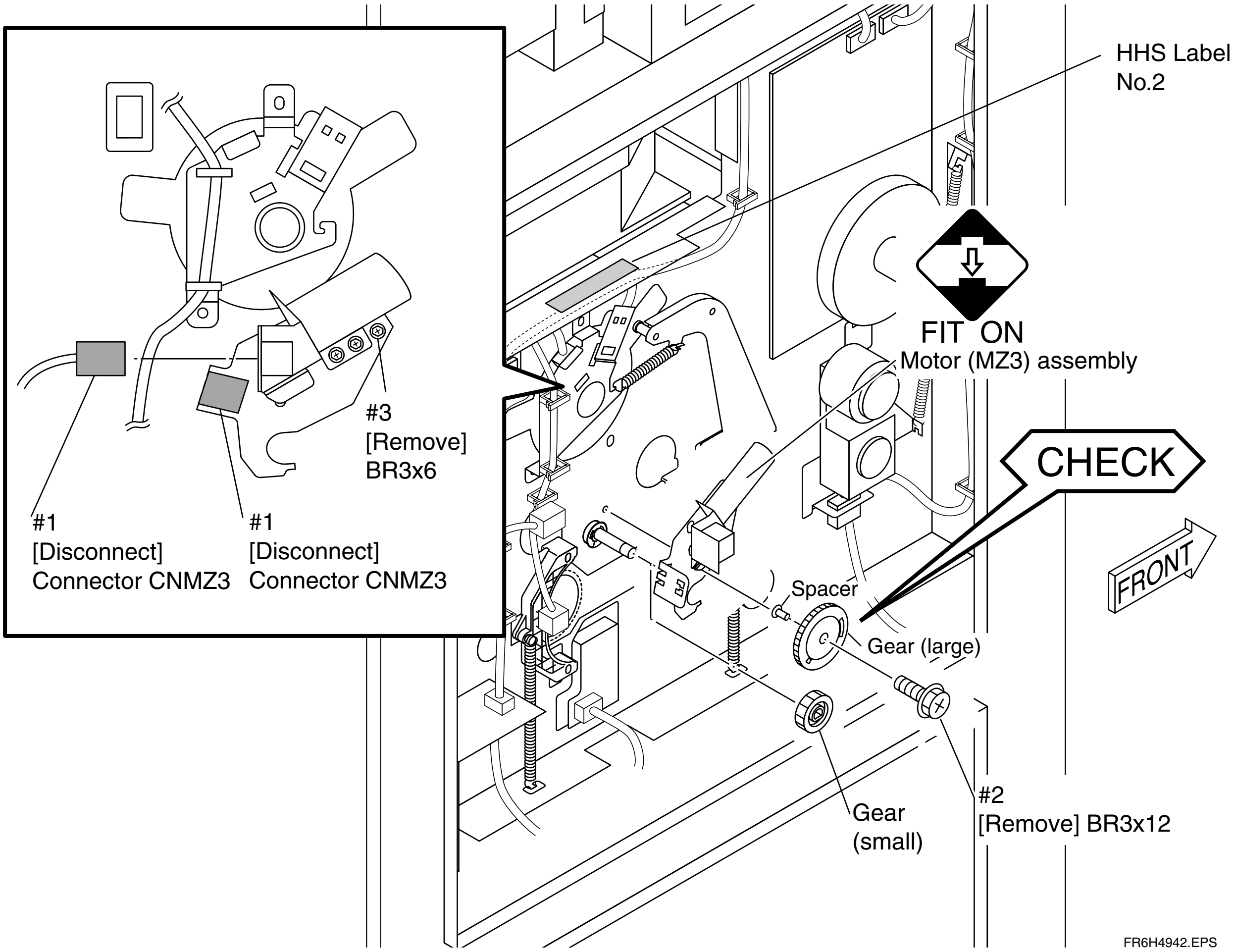
10.8 Sensor (SZ5)



FR6H4954.EPS

■ Removal Procedures

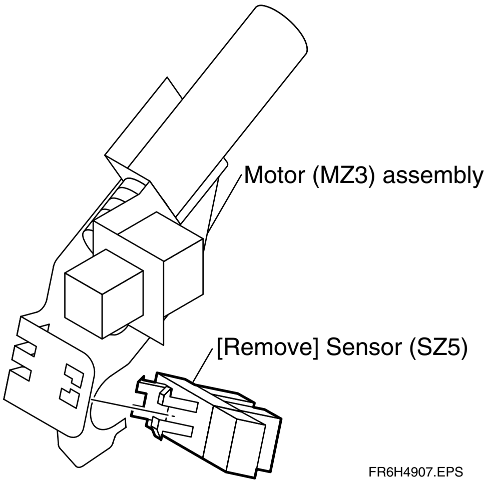
(1) Remove the motor (MZ3) assembly.



HHS Label
No.2
FIT ON
Motor (MZ3) assembly
CHECK
FRONT
#3
[Remove]
BR3x6
#1
[Disconnect]
Connector CNMZ3
#1
[Disconnect]
Connector CNMZ3
Spacer
Gear (large)
Gear
(small)
#2
[Remove] BR3x12

FR6H4942.EPS

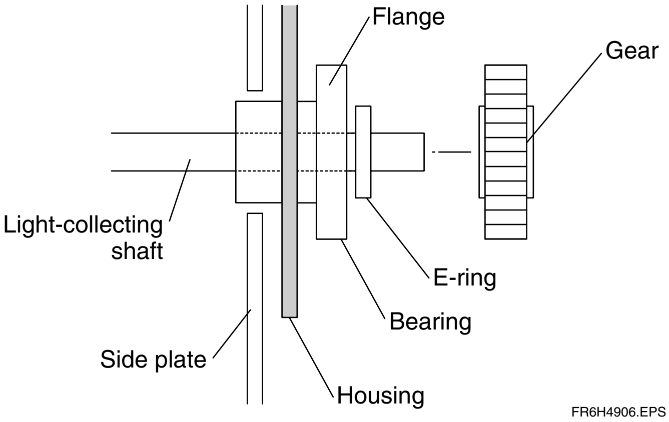
(2) Remove the sensor (SZ5).


Motor (MZ3) assembly
[Remove] Sensor (SZ5)
FR6H4907.EPS

■ Reinstallation Procedures

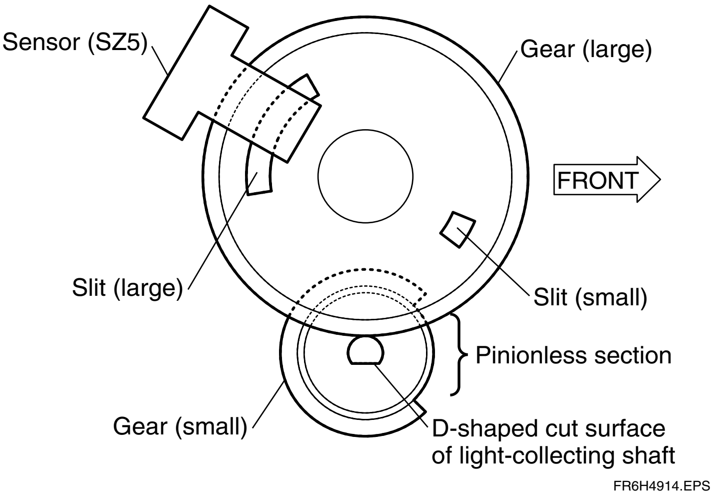
◆ *INSTRUCTION* ◆

When installing the motor assembly, ensure that the housing of the motor assembly is located between the flange of the bearing and the side plate.


Flange
Gear
Light-collecting shaft
E-ring
Bearing
Side plate
Housing
FR6H4906.EPS

◆ *INSTRUCTION* ◆

Refer to the illustration below when mounting the gear (large) and gear (small).


Sensor (SZ5)
Gear (large)
FRONT
Slit (large)
Slit (small)
Pinionless section
Gear (small)
D-shaped cut surface of light-collecting shaft
FR6H4914.EPS

For reinstallation, reverse the removal steps.

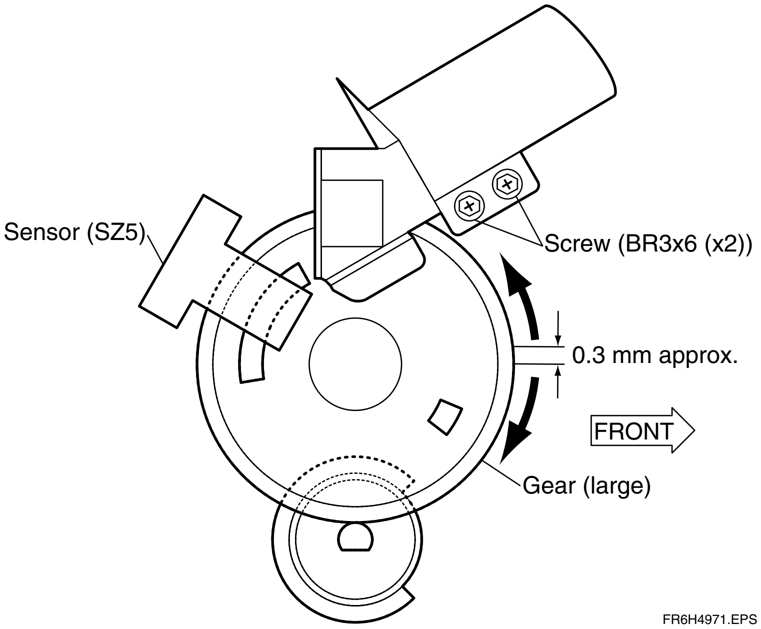
■ Check/Adjustment Procedures

(1) Check the engagement between the gear (large) and the worm gear of the motor (MZ3).

GOOD: There should be some backlash (about 0.3 mm).

NG: There is no backlash (the gear (large) and the worm gear of the motor (MZ3) move).

If the engagement between the gears is inappropriate, loosen the screws (BR3x6 (x2)) that retain the motor (MZ3). and adjust the engagement as appropriate.


Sensor (SZ5)
Screw (BR3x6 (x2))
0.3 mm approx.
FRONT
Gear (large)
FR6H4971.EPS

(2) Power ON the CL/RU, and verify that a dust removal operation failure or dust removal function lock error does not occur.

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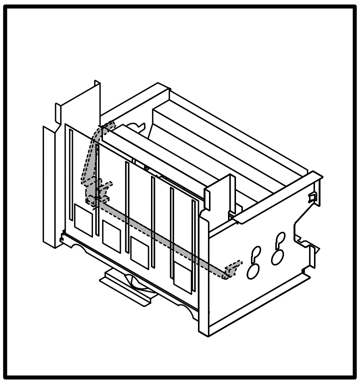
10.9 Driving-Shaft Grip Release Arm



FR6H4960.EPS

■ Removal Procedures

(1) Remove the covers.

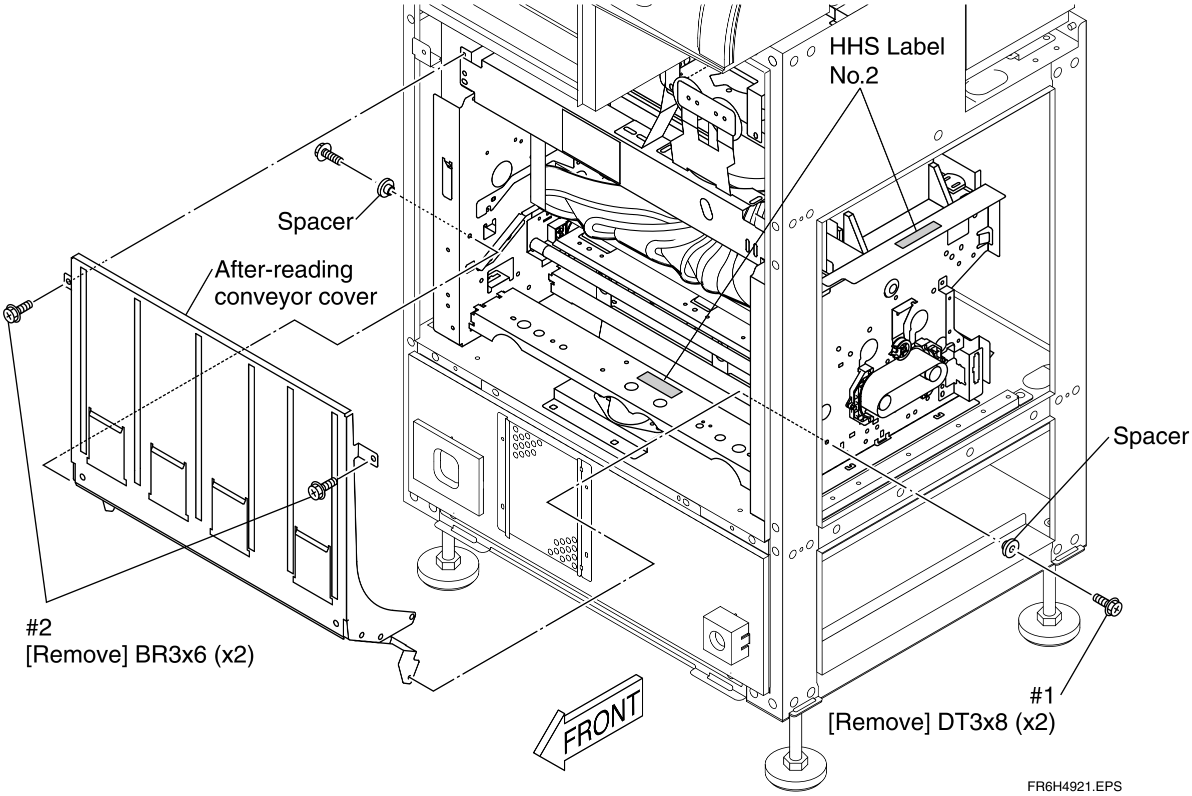
- Front cover
- Top light protect plate
- Left-hand side cover
- Right-hand side cover

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the flywheel.

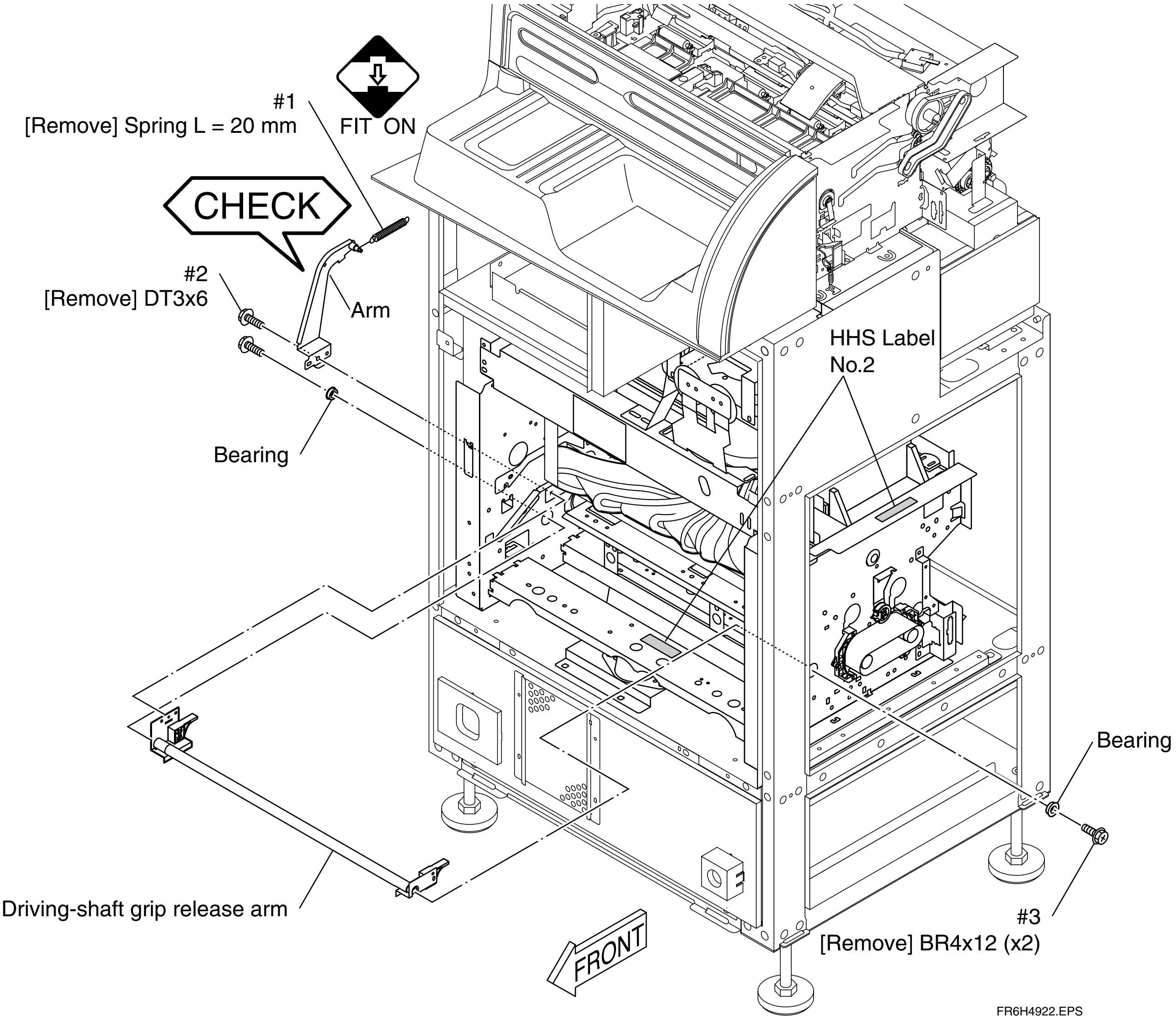
☞ "10.3 Flywheel"

(3) Remove the after-reading conveyor cover.

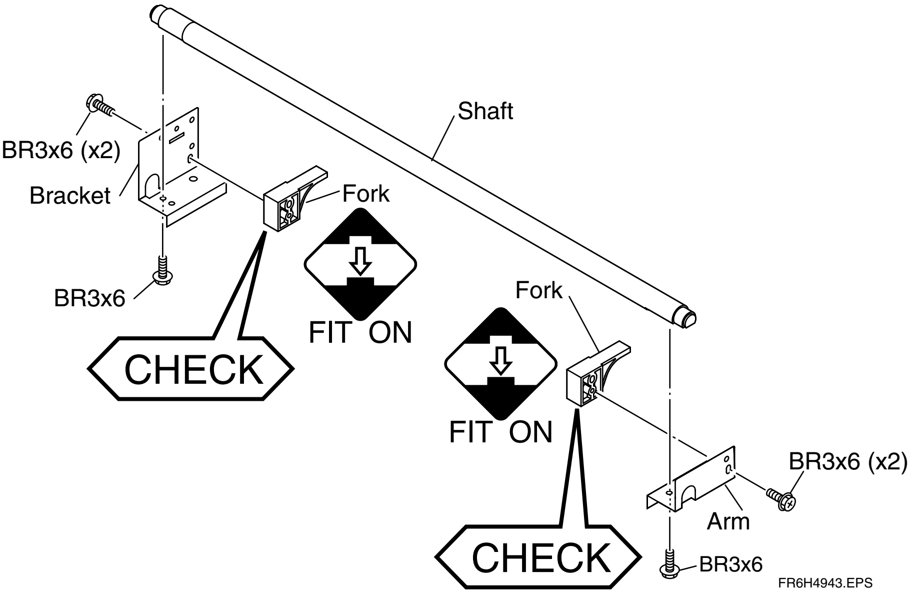

HHS Label
No.2
Spacer
After-reading
conveyor cover
Spacer
#2
[Remove] BR3x6 (x2)
FRONT
#1
[Remove] DT3x8 (x2)

FR6H4921.EPS

(4) Remove the driving-shaft grip release arm.


#1
[Remove] Spring L = 20 mm
FIT ON
CHECK
#2
[Remove] DT3x6
Arm
Bearing
HHS Label
No.2
Bearing
Driving-shaft grip release arm
FRONT
#3
[Remove] BR4x12 (x2)
FR6H4922.EPS

■ Exploded View

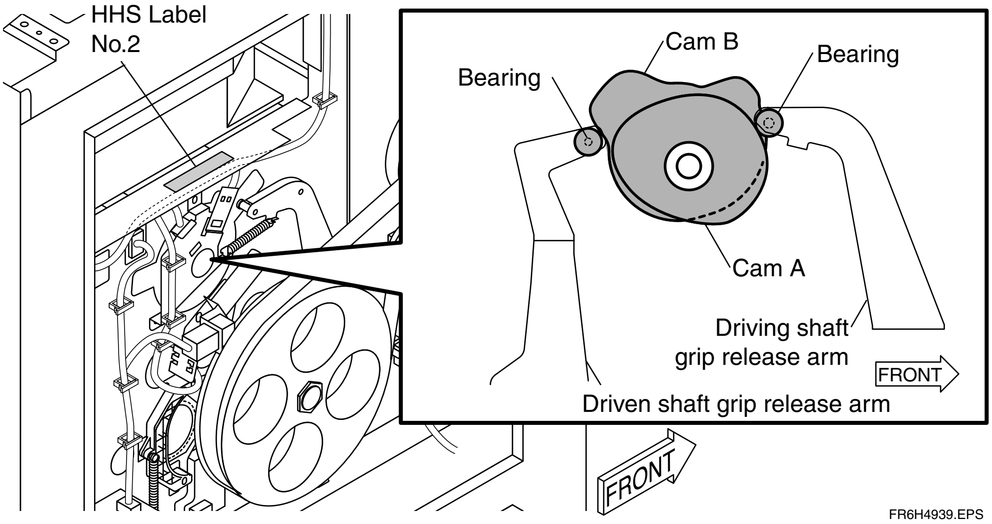

Shaft
BR3x6 (x2)
Bracket
Fork
BR3x6
FIT ON
CHECK
Fork
FIT ON
BR3x6 (x2)
Arm
CHECK
BR3x6
FR6H4943.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

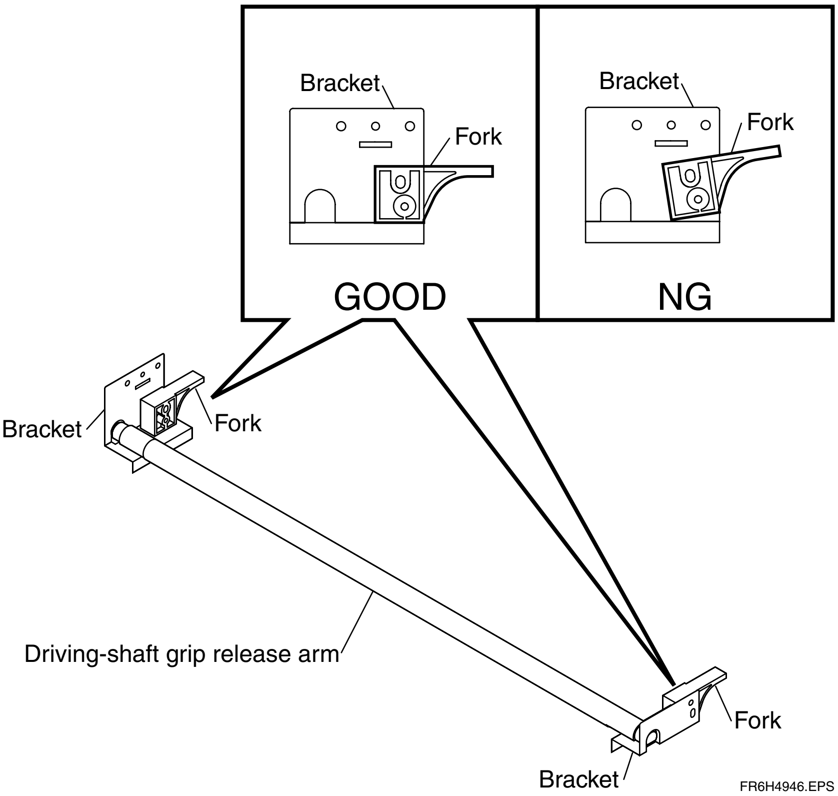
- Make sure that the bearing for the driving-shaft grip release arm is brought into contact with the outer periphery of the cam A.


HHS Label
No.2
Bearing
Cam B
Bearing
Cam A
Driving shaft grip release arm
FRONT
Driven shaft grip release arm
FRONT

FR6H4939.EPS

◆ *INSTRUCTION* ◆

When the fork for the driving-shaft grip release arm is removed and then reinstalled, make sure that there is no gap between the bracket and fork.


Bracket
Fork
GOOD
Bracket
Fork
NG
Bracket
Fork
Driving-shaft grip release arm
Fork
Bracket

FR6H4946.EPS

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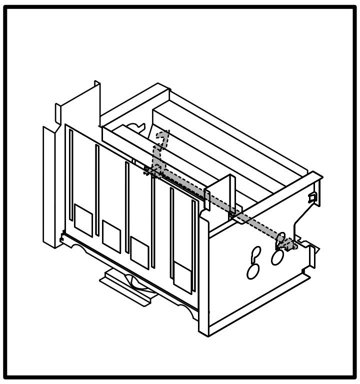
10.10Driven-Shaft Grip Release Arm



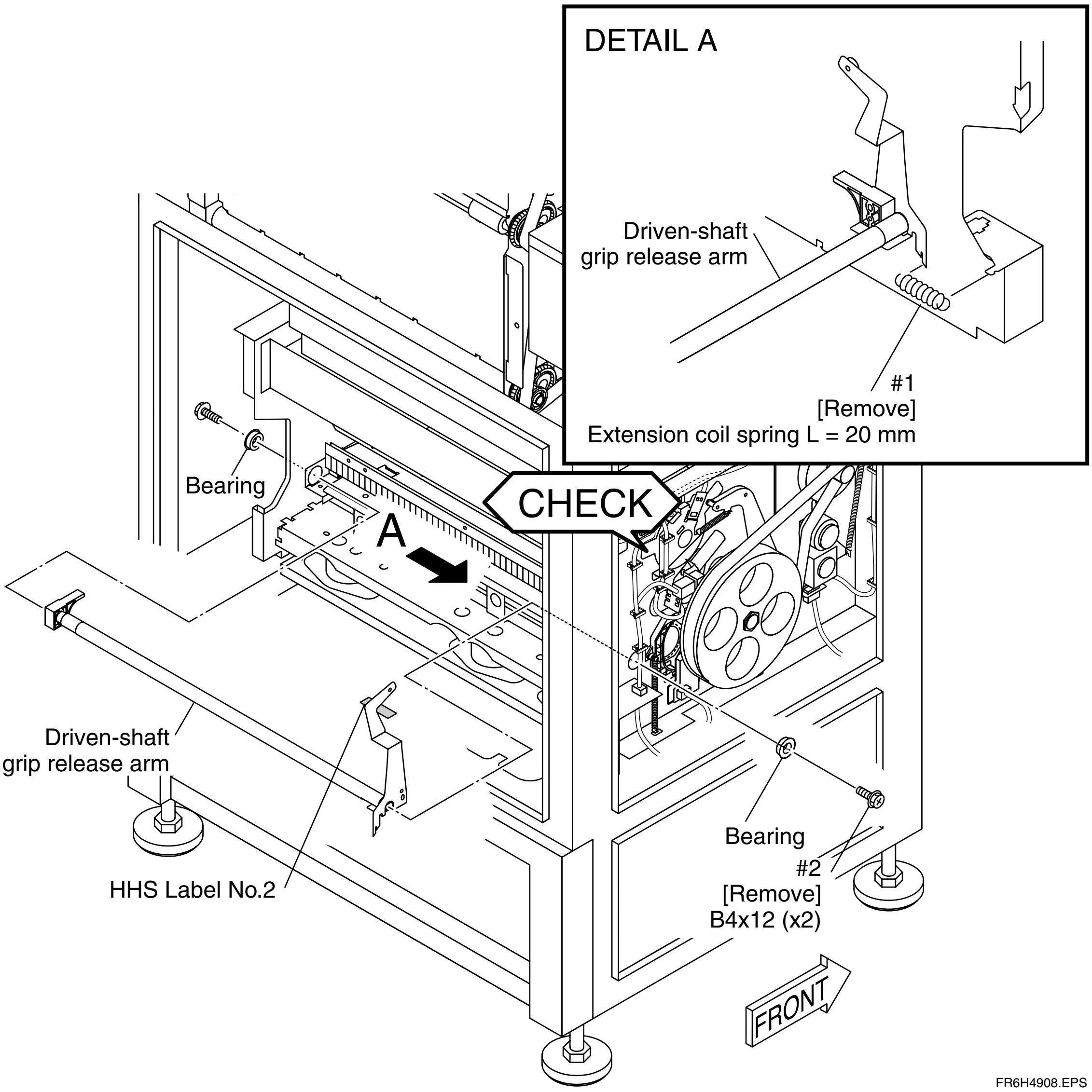
FR6H4955.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

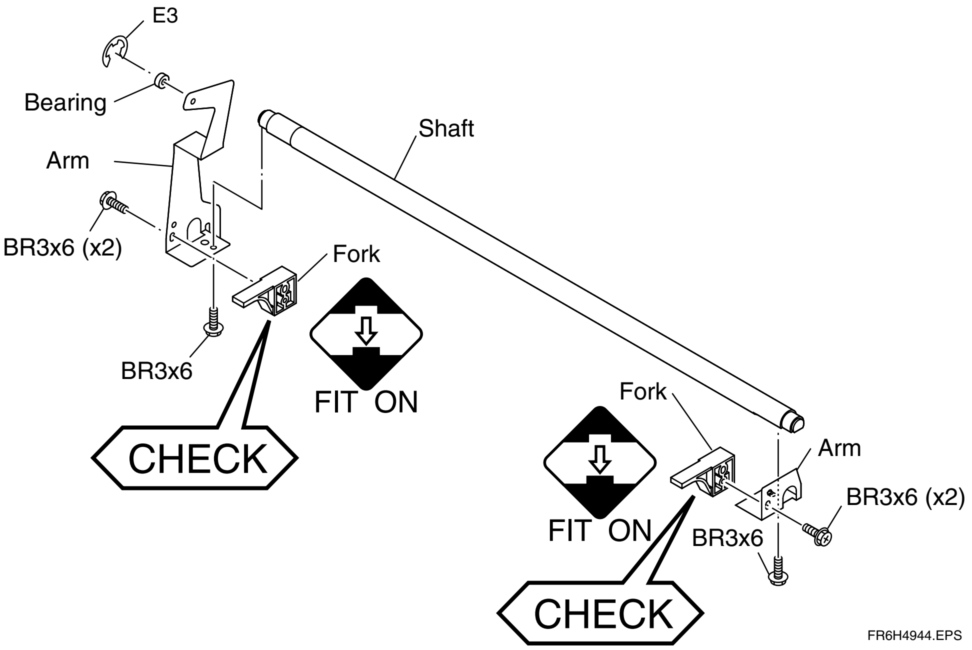
☞ “7.1 Side-Positioning Conveyor”

(2) Remove the driven-shaft grip release arm.


DETAIL A
Driven-shaft
grip release arm
#1
[Remove]
Extension coil spring L = 20 mm
CHECK
A
Bearing
Driven-shaft
grip release arm
HHS Label No.2
Bearing
#2
[Remove]
B4x12 (x2)
FRONT

FR6H4908.EPS

■ Exploded View

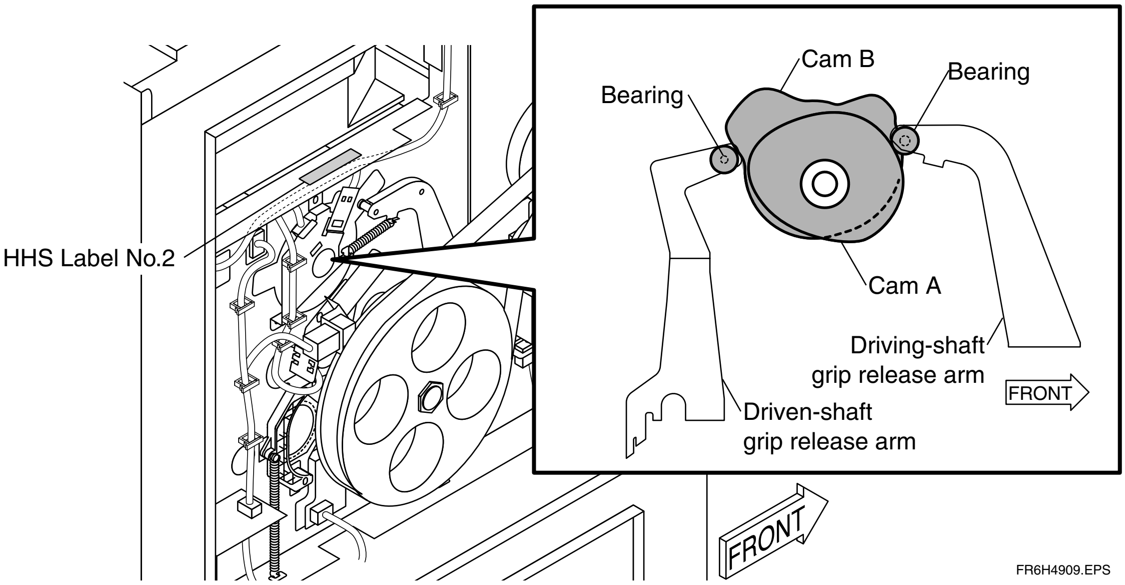

E3
Bearing
Arm
Shaft
BR3x6 (x2)
Fork
BR3x6
FIT ON
CHECK
Fork
Arm
BR3x6 (x2)
FIT ON
BR3x6
CHECK
FR6H4944.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

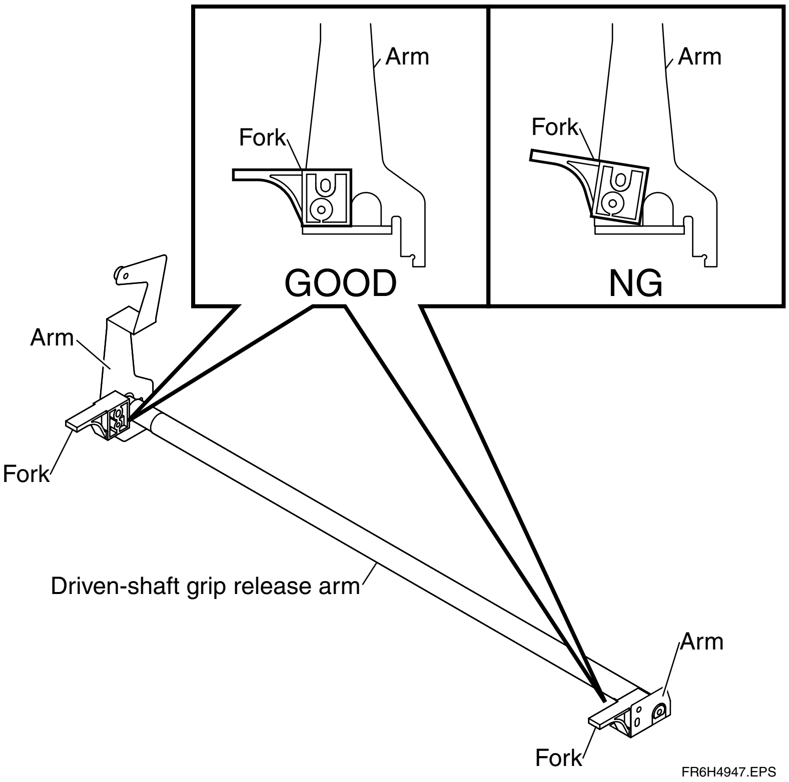
- Make sure that the bearing for the driving-shaft grip release arm is brought into contact with the outer periphery of the cam B.


HHS Label No.2
Cam B
Bearing
Bearing
Cam A
Driving-shaft grip release arm
FRONT
Driven-shaft grip release arm
FRONT
FR6H4909.EPS

■ Check/Adjustment Procedures

◆ *INSTRUCTION* ◆

When the fork for the driven-shaft grip release arm is removed and then reinstalled, make sure that there is no gap between the arm and fork.


Arm
Fork
GOOD
Arm
Fork
NG
Arm
Fork
Driven-shaft grip release arm
Arm
Fork
FR6H4947.EPS

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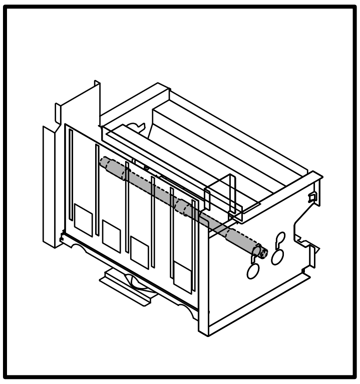
BLANK PAGE

BLANK PAGE

10.11 Driving-Shaft Grip Roller (Upper)



FR6H4961.EPS

■ Removal Procedures

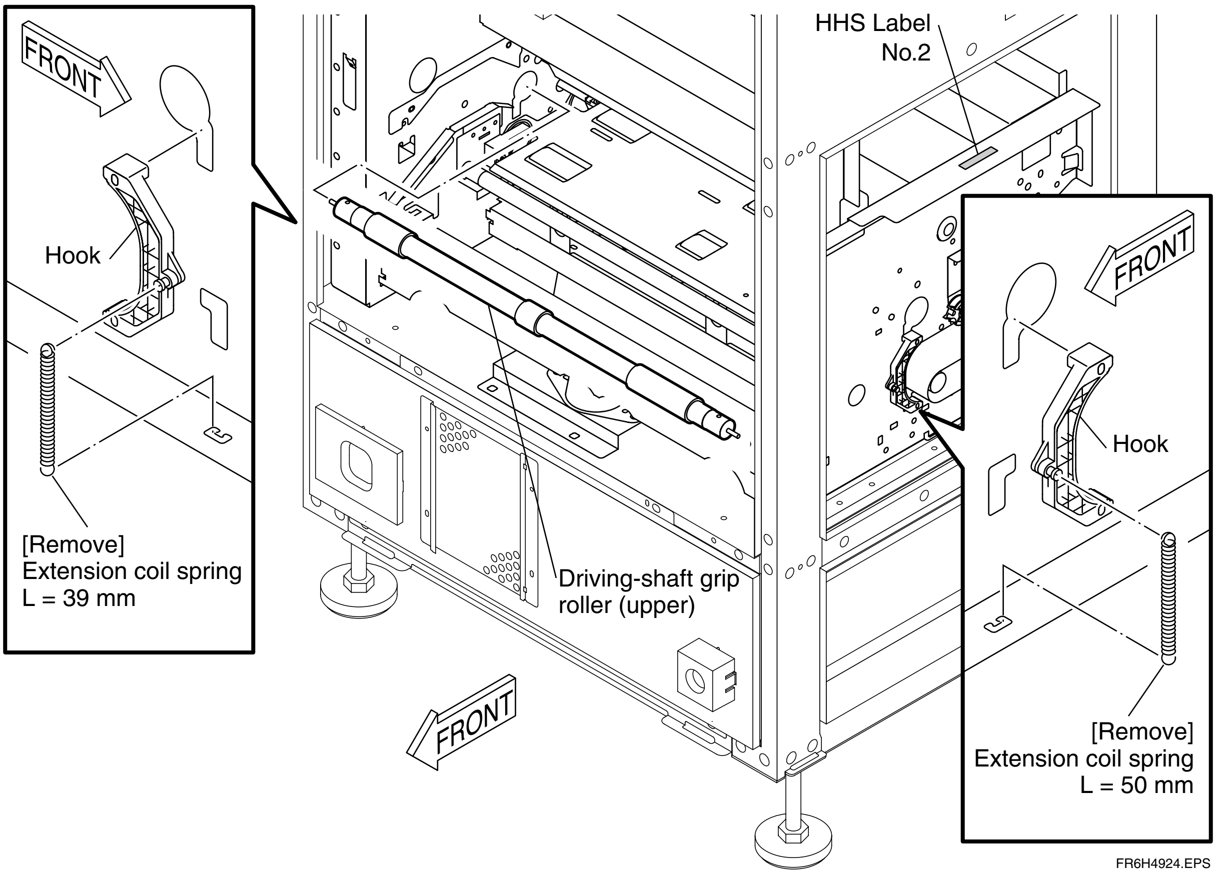
(1) Remove the light-collecting unit.

☞ “8.1 Light-Collecting Unit”

(2) Remove the flywheel.

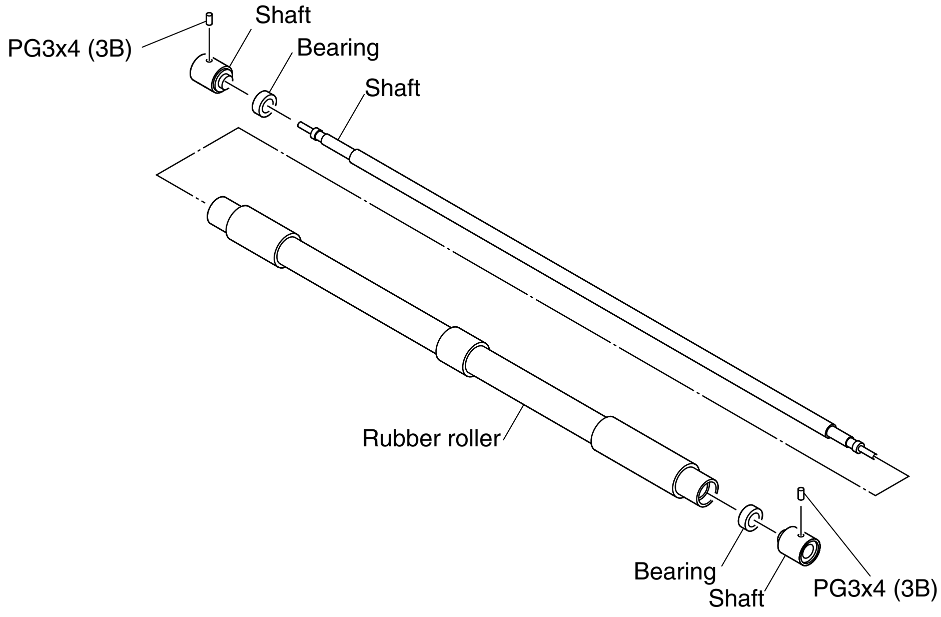
☞ “10.3 Flywheel”

(3) Remove the driving-shaft grip roller (upper).


FRONT
Hook
[Remove]
Extension coil spring
L = 39 mm
HHS Label
No.2
Driving-shaft grip
roller (upper)
FRONT
FRONT
Hook
[Remove]
Extension coil spring
L = 50 mm

FR6H4924.EPS

■ Exploded View

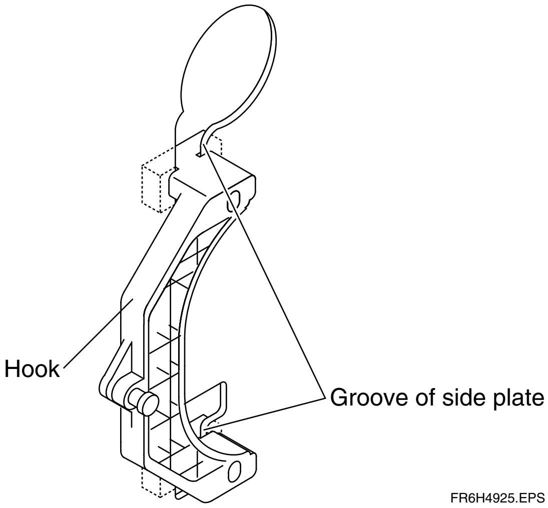

PG3x4 (3B)
Shaft
Bearing
Shaft
Rubber roller
Bearing
Shaft
PG3x4 (3B)

FR6H4945.EPS

■ Reinstallation Procedures

◆ *INSTRUCTIONS* ◆

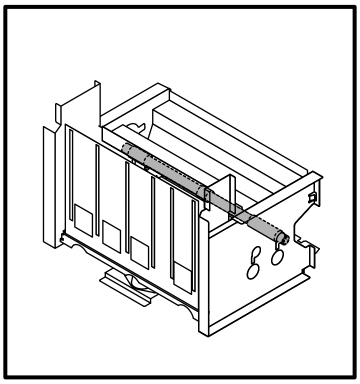
- *The extension coil springs differ in size depending on where they are attached. Use care not to confuse their locations.*
- *To install the hook, snap it securely into the groove of the side plate.*


Hook
Groove of side plate

FR6H4925.EPS

For reinstallation, reverse the removal steps.

10.12 Driven-Shaft Grip Roller (Upper)



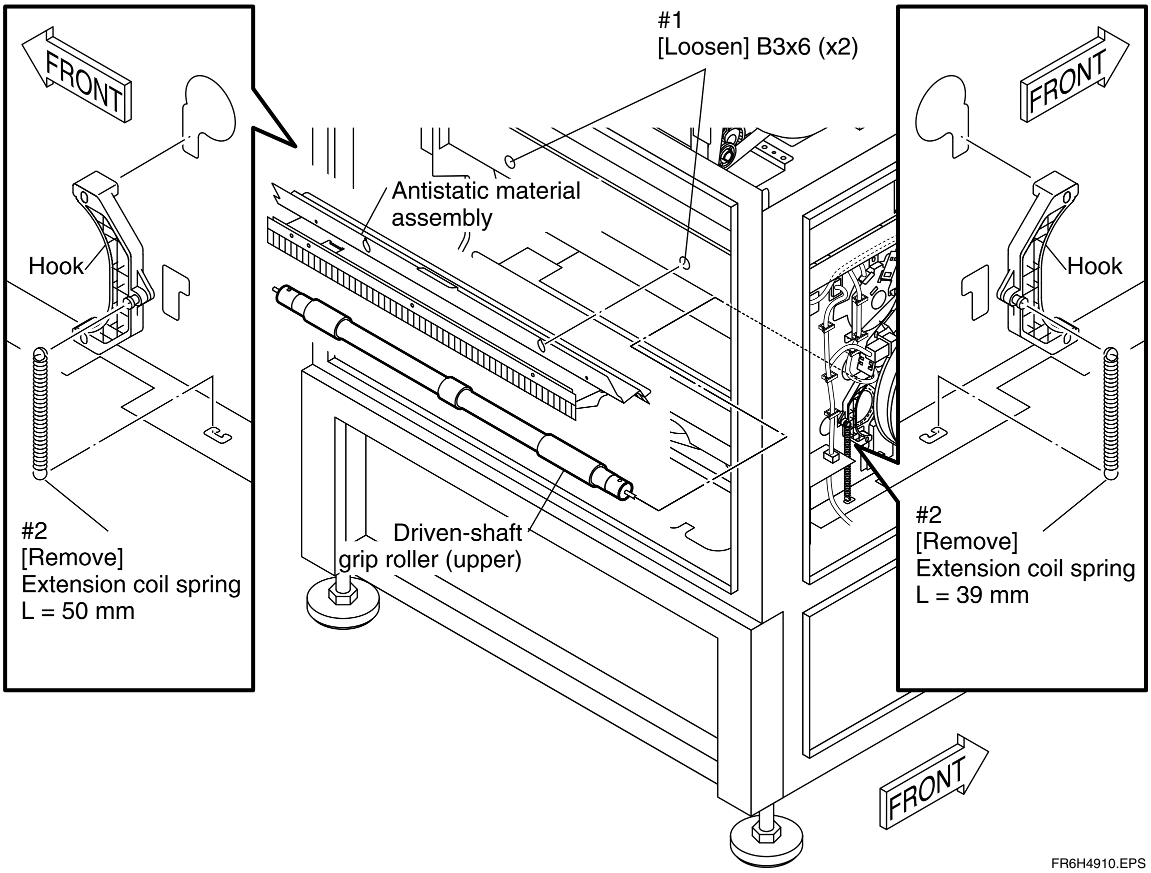
FR6H4956.EPS

■ Removal Procedures

(1) Remove the side-positioning conveyor.

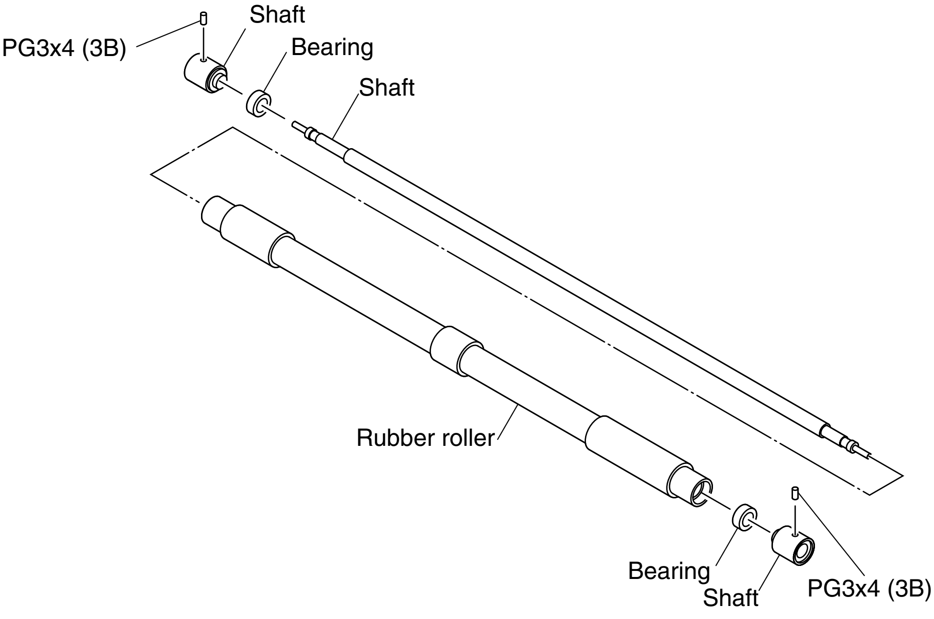
☞ “7.1 Side-Positioning Conveyor”

(2) Remove the driven-shaft grip roller (upper).


FRONT
Hook
#2
[Remove]
Extension coil spring
L = 50 mm
#1
[Loosen] B3x6 (x2)
Antistatic material assembly
Driven-shaft grip roller (upper)
FRONT
Hook
#2
[Remove]
Extension coil spring
L = 39 mm
FRONT

FR6H4910.EPS

■ Exploded View

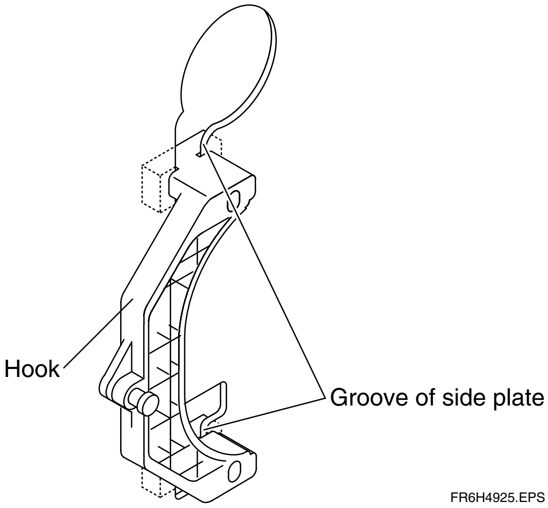

PG3x4 (3B)
Shaft
Bearing
Shaft
Rubber roller
Bearing
Shaft
PG3x4 (3B)

FR6H4945.EPS

■ Reinstallation Procedures

◆ *INSTRUCTIONS* ◆

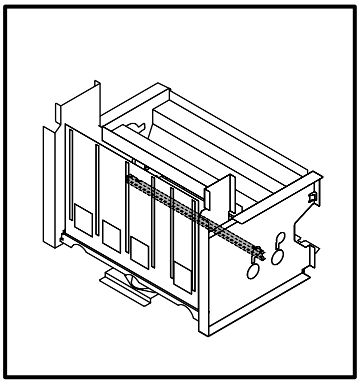
- *The extension coil springs differ in size depending on where they are attached. Use care not to confuse their locations.*
- *To install the hook, snap it securely into the groove of the side plate.*


Hook
Groove of side plate

FR6H4925.EPS

For reinstallation, reverse the removal steps.

10.13Light-Collecting Mirror



FR6H4957.EPS

◆ INSTRUCTION ◆

When handling the light-collecting mirror, pay attention to the following points.

- *Wear gloves.*
  However, never touch the reflection surface of the light-collecting mirror even when you are wearing the gloves.
- *Wear a mask so that saliva does not come into contact with the light-collecting mirror.*

■ Removal Procedures

(1) Remove the flywheel.

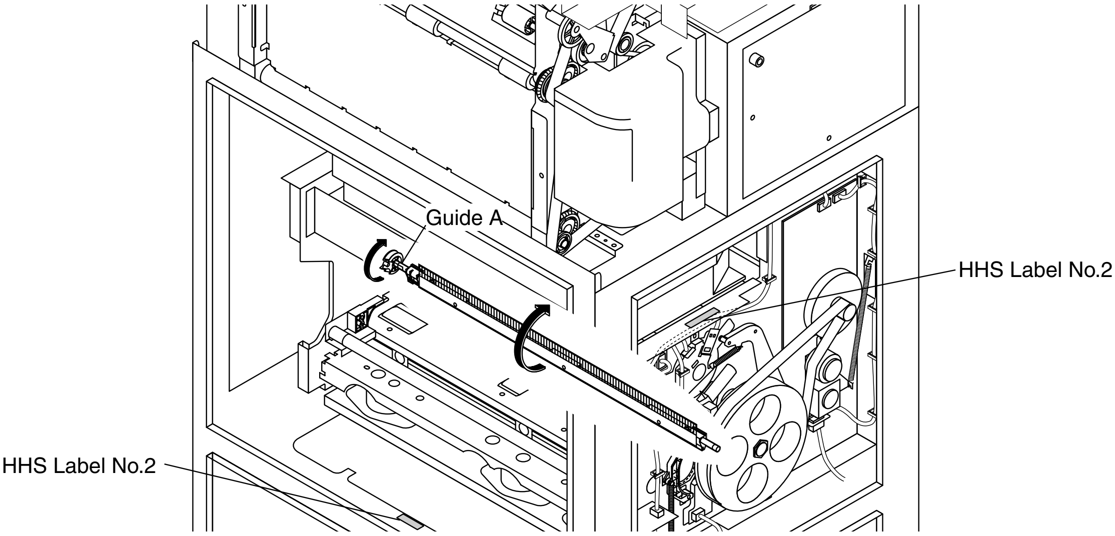
☞ “10.3 Flywheel”

(2) Remove the driven-shaft grip roller (upper).

☞ “10.12 Driven-Shaft Grip Roller (Upper)”

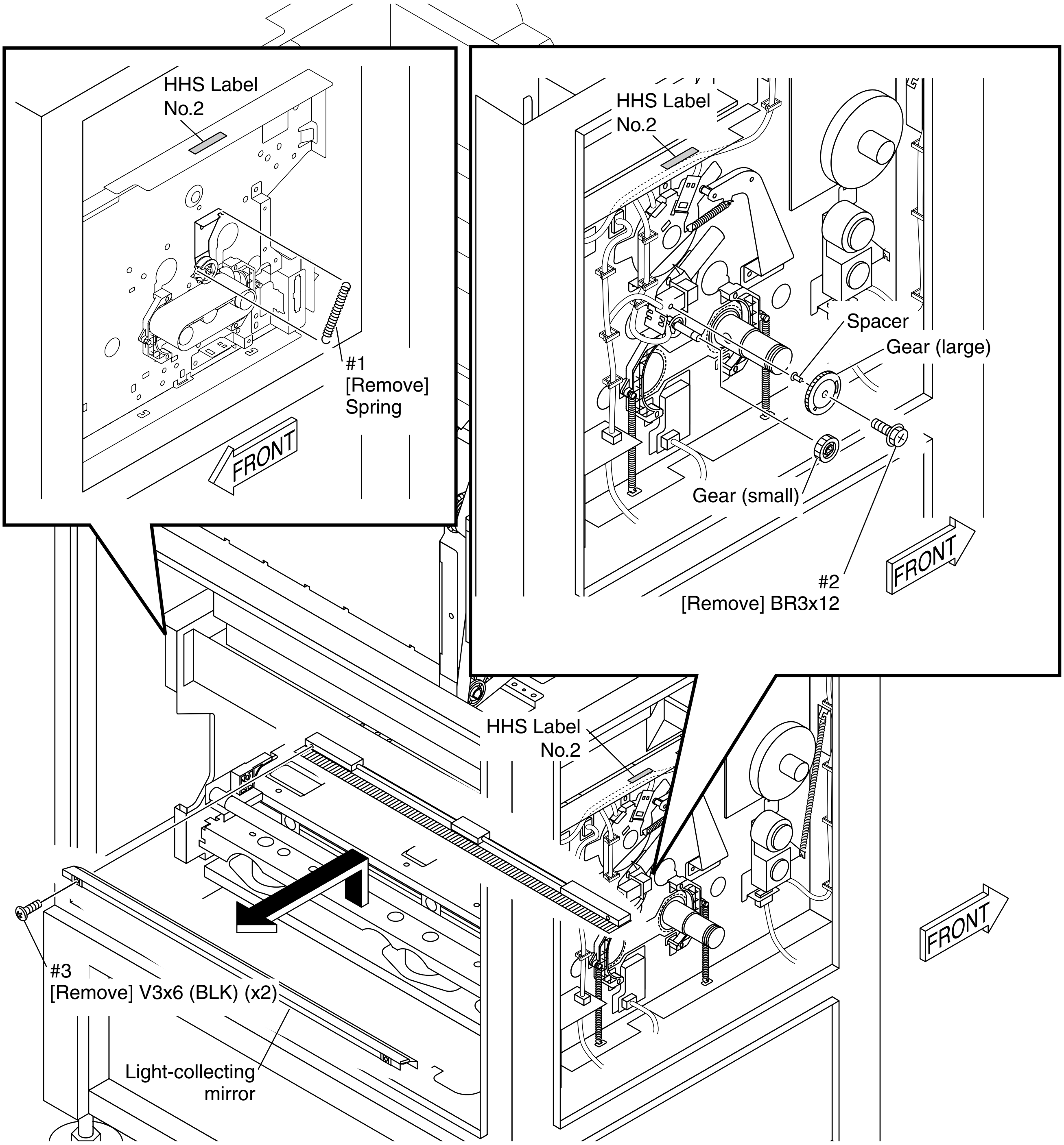
◇ REFERENCE ◇

When removing the light-collecting mirror, rotate the guide A in the direction of the arrow as illustrated below to facilitate access to the screw that retains the light-collecting mirror.



FR6H4912.EPS

(3) Remove the light-collecting mirror.

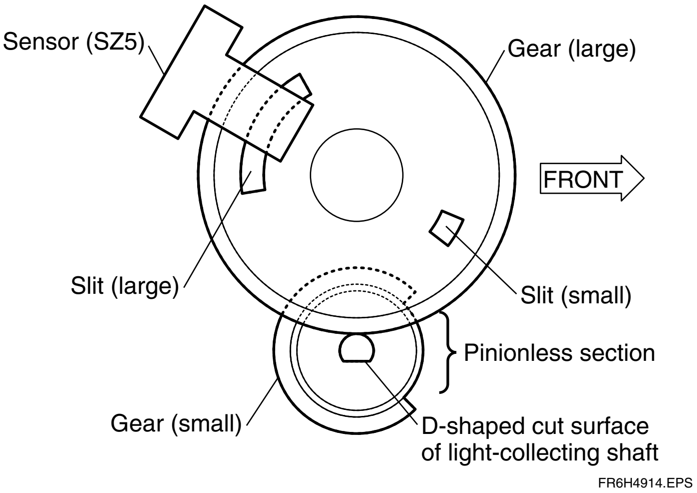

HHS Label
No.2
#1
[Remove]
Spring
FRONT
HHS Label
No.2
Spacer
Gear (large)
Gear (small)
#2
[Remove] BR3x12
FRONT
HHS Label
No.2
FRONT
#3
[Remove] V3x6 (BLK) (x2)
Light-collecting
mirror

FR6H4913.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

Refer to the illustration below when mounting the gear (large) and gear (small).


Sensor (SZ5)
Gear (large)
FRONT
Slit (large)
Slit (small)
Pinionless section
Gear (small)
D-shaped cut surface of light-collecting shaft
FR6H4914.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

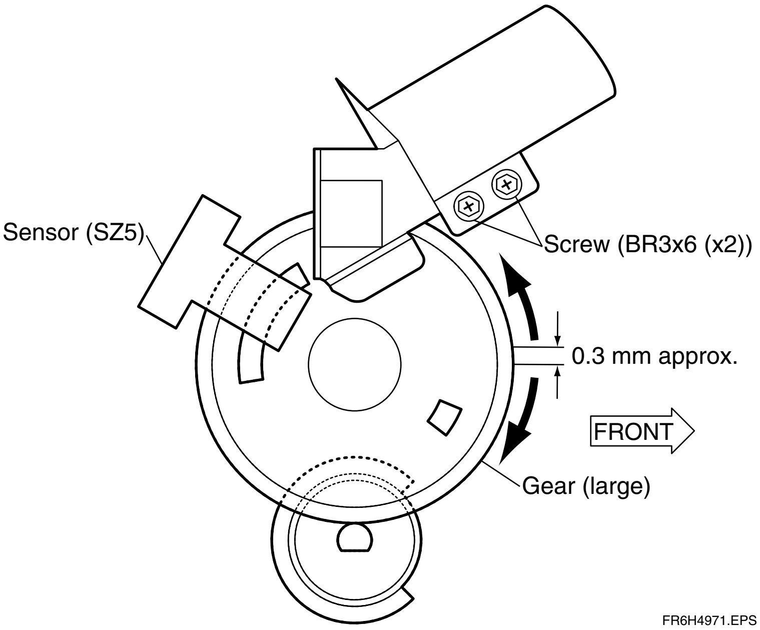
(1) Verify that the D-shaped cut surface of the light-collecting shaft and the gear (large) and gear (small) are mounted in their correct orientation.

(2) Check the engagement between the gear (large) and the worm gear of the motor (MZ3).

GOOD: There should be some backlash (about 0.3 mm).

NG: There is no backlash (the gear (large) and the worm gear of the motor (MZ3) move).

If the engagement between the gears is inappropriate, loosen the screws (BR3x6 (x2)) that retain the motor (MZ3). and adjust the engagement as appropriate.


Sensor (SZ5)
Screw (BR3x6 (x2))
0.3 mm approx.
FRONT
Gear (large)
FR6H4971.EPS

(3) Power ON the CL/RU, and verify that a dust removal operation failure or dust removal function lock error does not occur.

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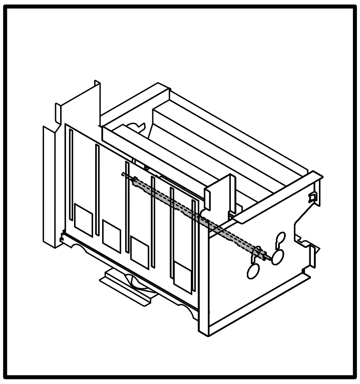
10.14 Light-Collecting Shaft



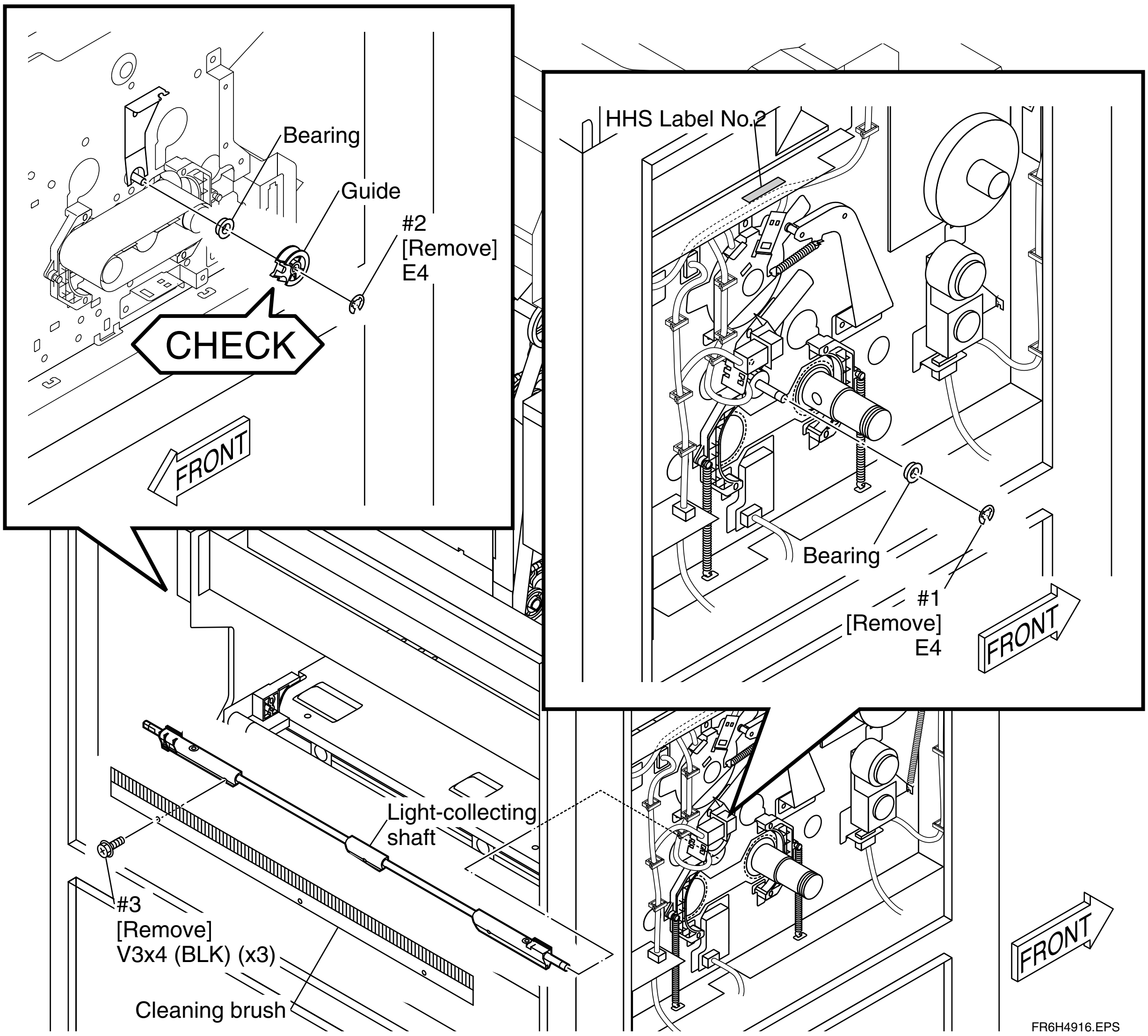
FR6H4958.EPS

■ Removal Procedures

(1) Remove the light-collecting mirror.

☞ "10.13 Light-Collecting Mirror"

(2) Remove the light-collecting shaft.

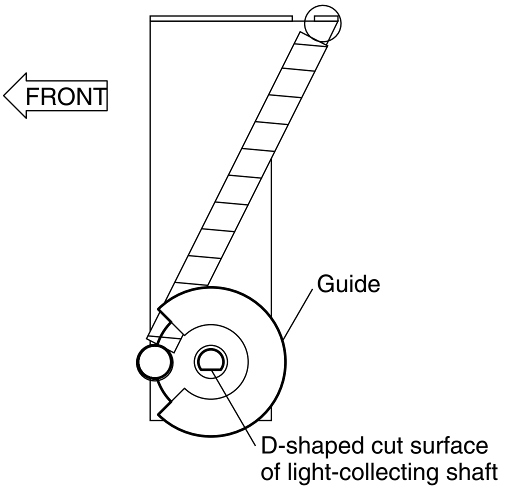

Bearing
Guide
#2
[Remove]
E4
CHECK
FRONT
HHS Label No.2
Bearing
#1
[Remove]
E4
FRONT
Light-collecting
shaft
#3
[Remove]
V3x4 (BLK) (x3)
Cleaning brush
FRONT

FR6H4916.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

Install the guide in the orientation illustrated below.


FRONT
Guide
D-shaped cut surface
of light-collecting shaft

FR6H4917.EPS

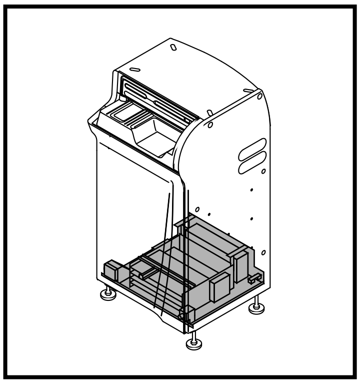
For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the guide is mounted in its correct orientation.

11. Removing and Reinstalling the Controller

11.1 Controller



FR6H4A56.EPS

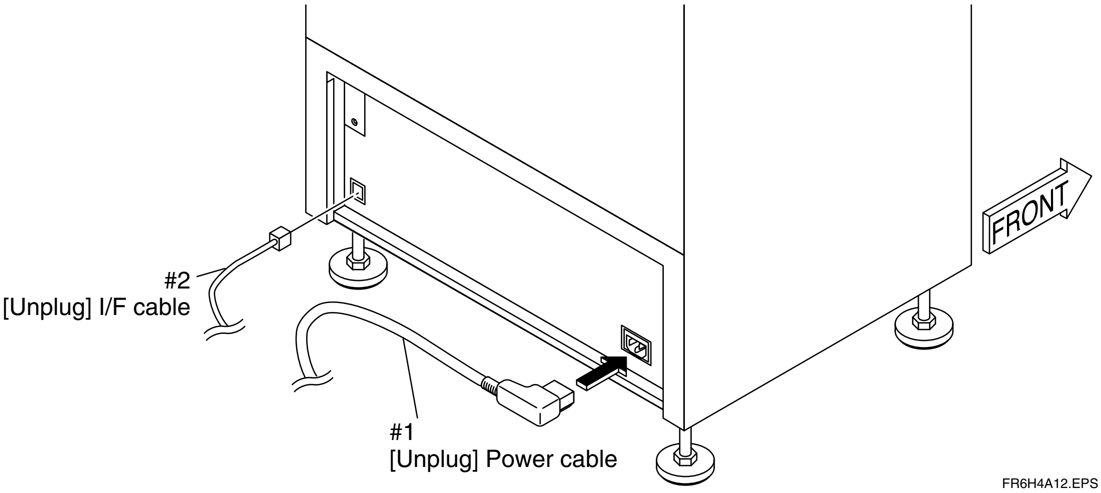
WARNING

To avoid electric shock hazards, turn OFF the breaker of the machine and unplug the power cable from the outlet before performing the procedures.

■ Removal Procedures

(1) Unplug the cables.

- Power cable
- I/F cable



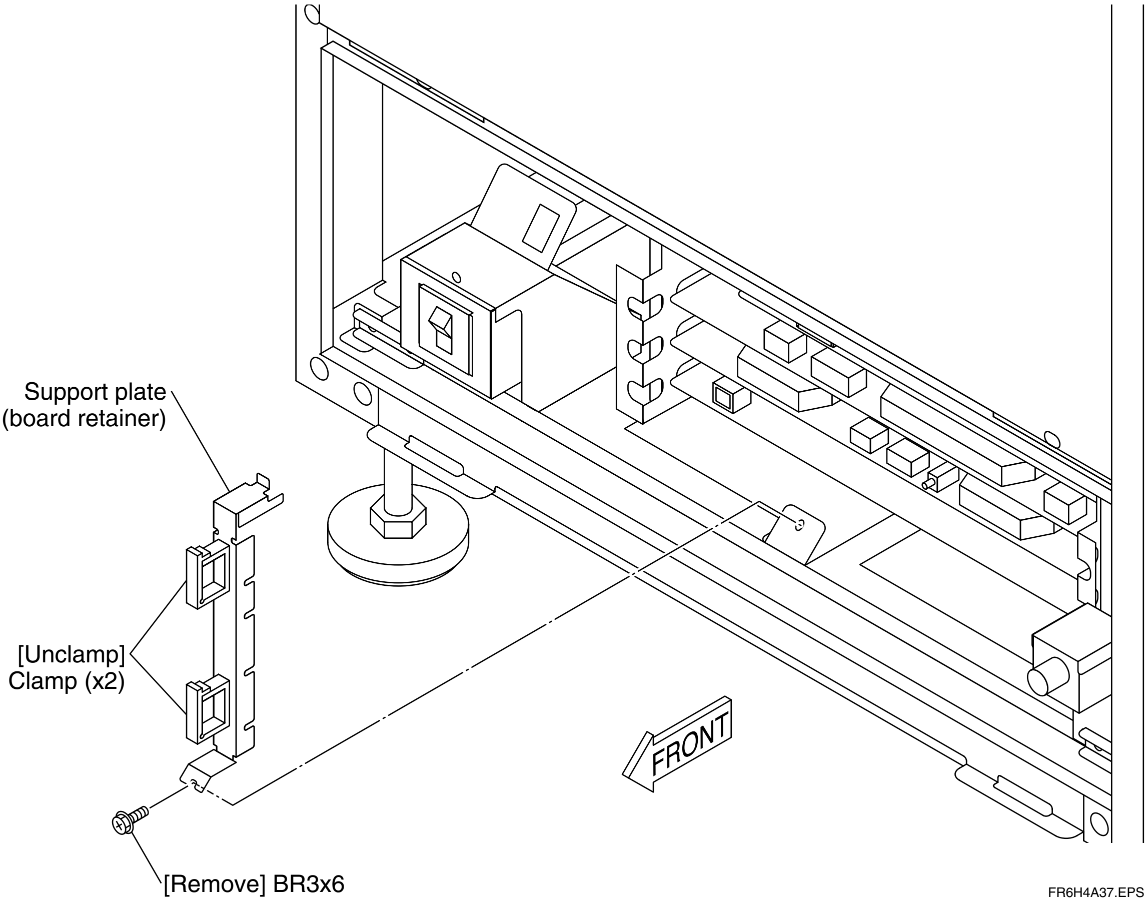
FR6H4A12.EPS

(2) Remove the covers.

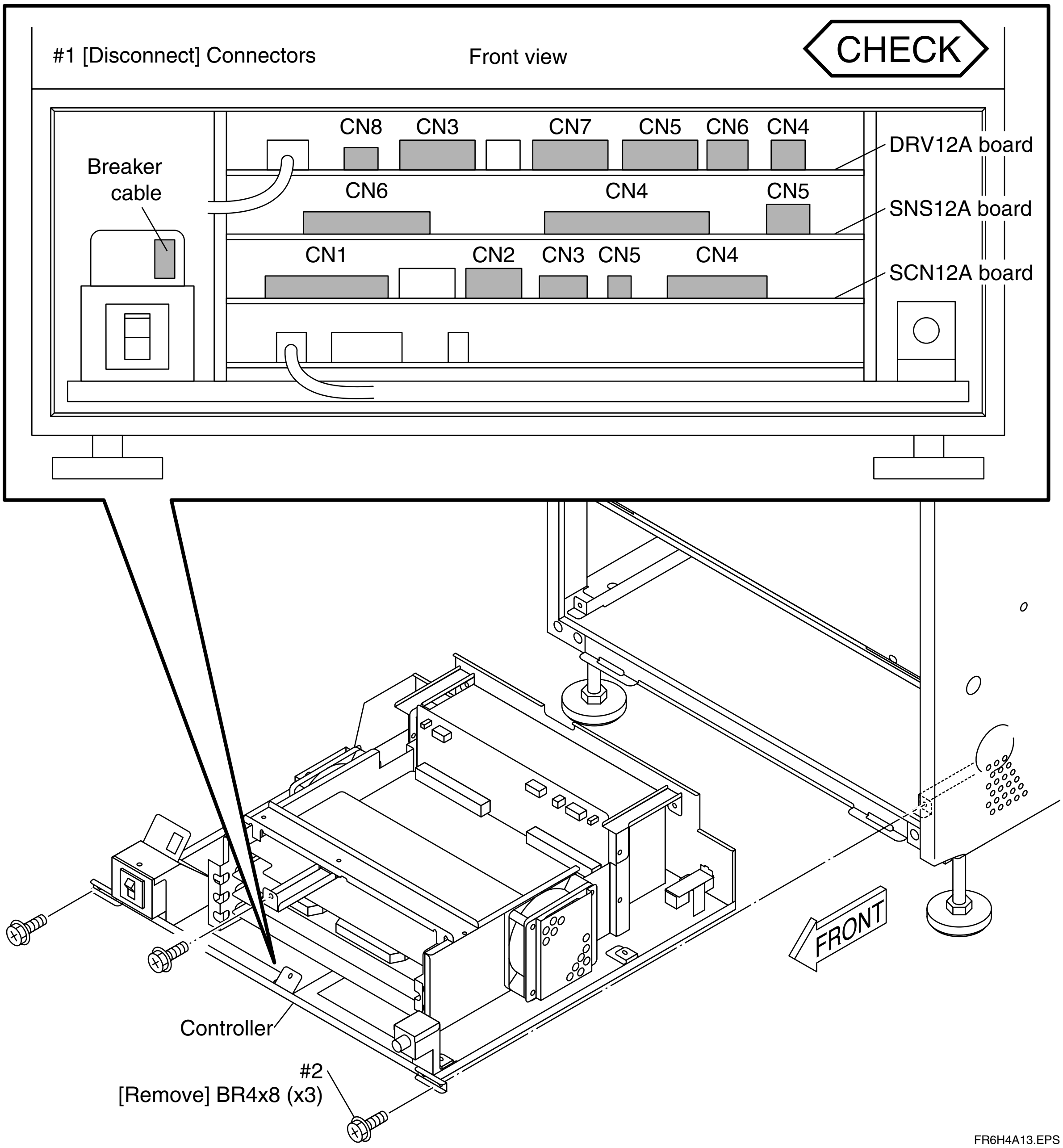
- Front cover
- Lower light protect plate

☞ “3.1 Removing and Reinstalling the Covers”

(3) Remove the support plate (board retainer).


Support plate
(board retainer)
[Unclamp]
Clamp (x2)
[Remove] BR3x6
FRONT
FR6H4A37.EPS

(4) Remove the controller.


#1 [Disconnect] Connectors
Front view
CHECK
Breaker cable
CN8
CN3
CN7
CN5
CN6
CN4
DRV12A board
CN6
CN4
CN5
SNS12A board
CN1
CN2
CN3
CN5
CN4
SCN12A board
FRONT
Controller
#2
[Remove] BR4x8 (x3)
FR6H4A13.EPS

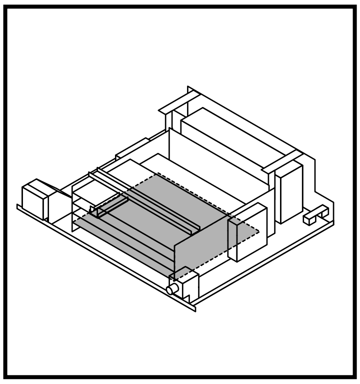
■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

■Check/Adjustment Procedures

- Make sure that the connectors are connected to their correct locations.

11.2 Replacing the CPU12A Board



FR6H4A51.EPS

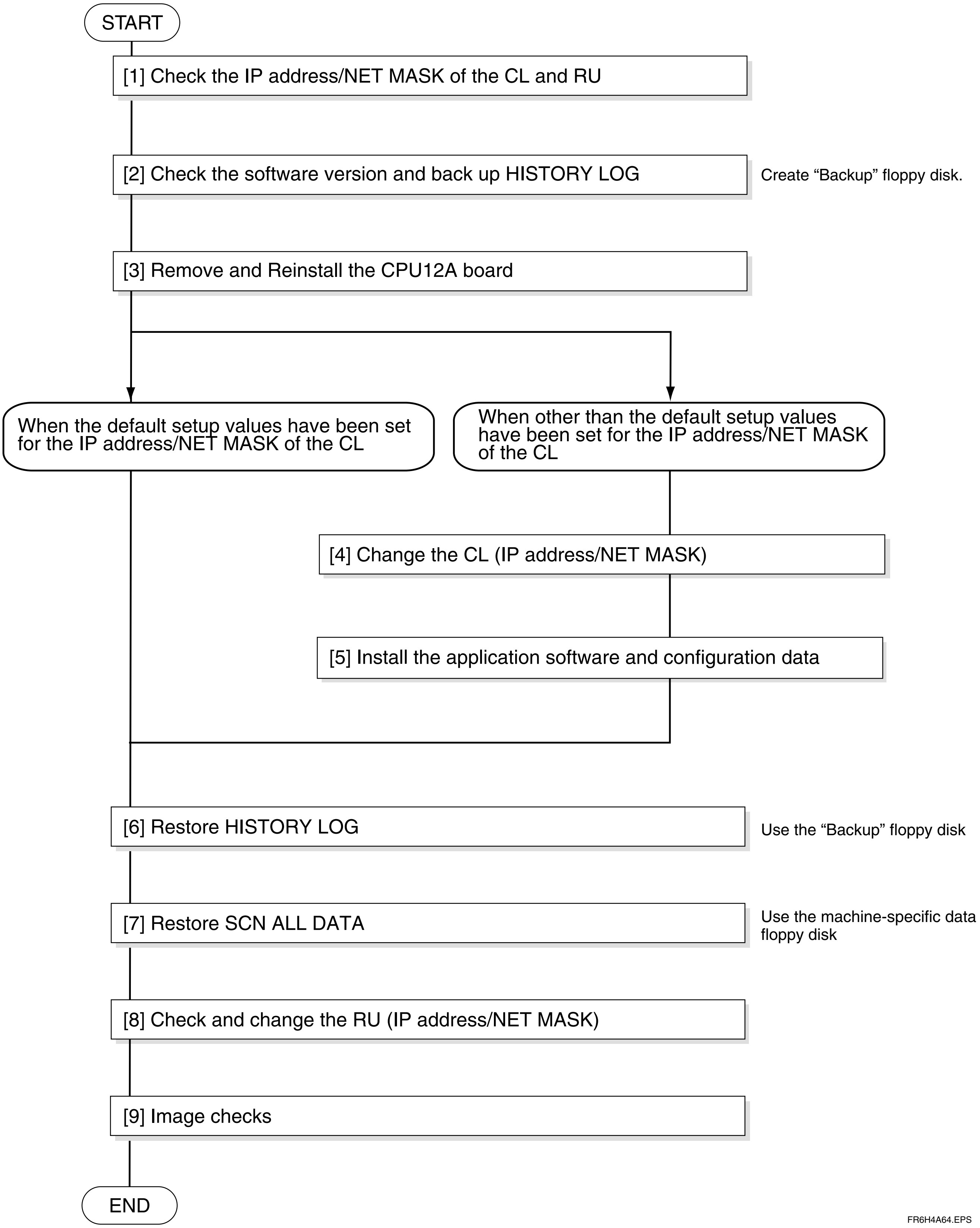
CAUTIONS

- *When the manganese lithium battery is completely drained, replace the board as a whole.*
- *Return the old board replaced to the Service Parts Center (manufacturer's factory).*
- *Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.*

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

A replacement flow for the CPU12A board is presented below.

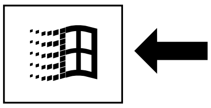

START
[1] Check the IP address/NET MASK of the CL and RU
[2] Check the software version and back up HISTORY LOG
Create “Backup” floppy disk.
[3] Remove and Reinstall the CPU12A board
When the default setup values have been set for the IP address/NET MASK of the CL
When other than the default setup values have been set for the IP address/NET MASK of the CL
[4] Change the CL (IP address/NET MASK)
[5] Install the application software and configuration data
[6] Restore HISTORY LOG
Use the “Backup” floppy disk
[7] Restore SCN ALL DATA
Use the machine-specific data floppy disk
[8] Check and change the RU (IP address/NET MASK)
[9] Image checks
END
FR6H4A64.EPS

[1] Check the IP address/NET MASK of the CL and RU

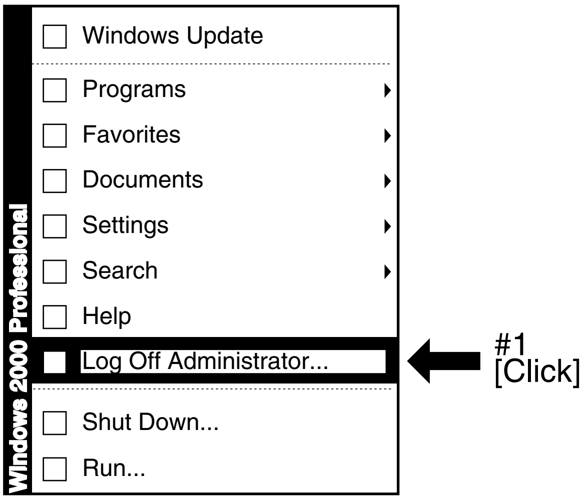
◆ NOTE ◆

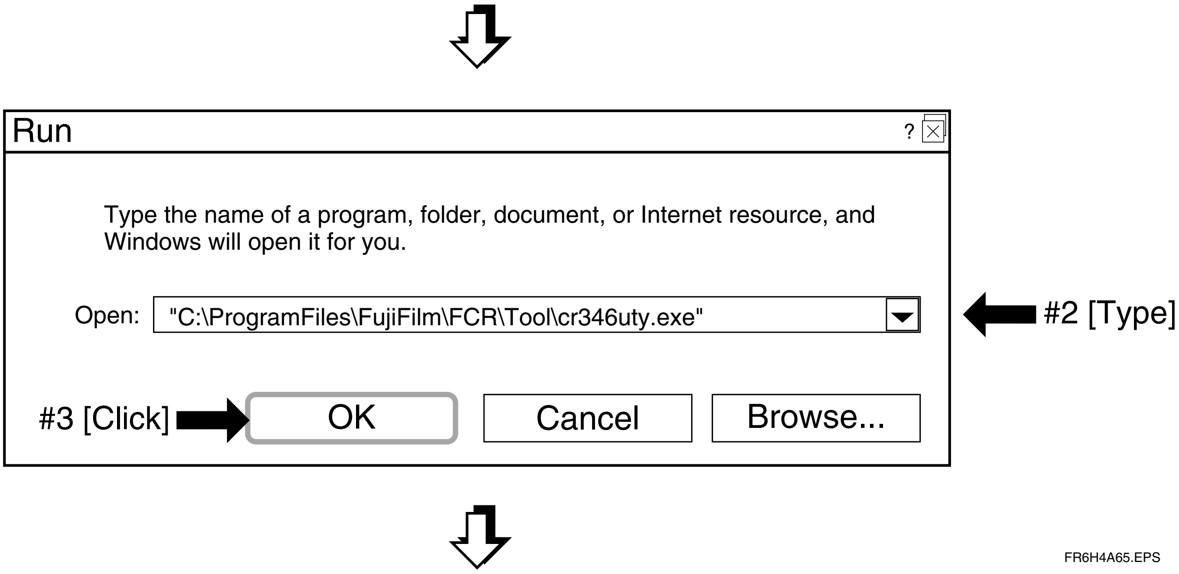
When the CPU12A board is replaced, the IP address of a new CPU12A board is at its default setting, so that it cannot be connected to the CL. Here, check to see whether the user is using the default setting. If the default setting is not used, it is necessary to take note of the user's setting.

(1) Press the [Windows] key to open the Start menu of Windows.



(2) Select [Run...] from the Start menu of Windows, and type ["C:\ProgramFiles\FujiFilm\FCR\Tool\cr346uty.exe"] to open the MAINTENANCE UTILITY, and display the EDIT CONFIGURATION window.


Windows 2000 Professional
Windows Update
Programs
Favorites
Documents
Settings
Search
Help
Log Off Administrator...
Shut Down...
Run...
#1 [Click]

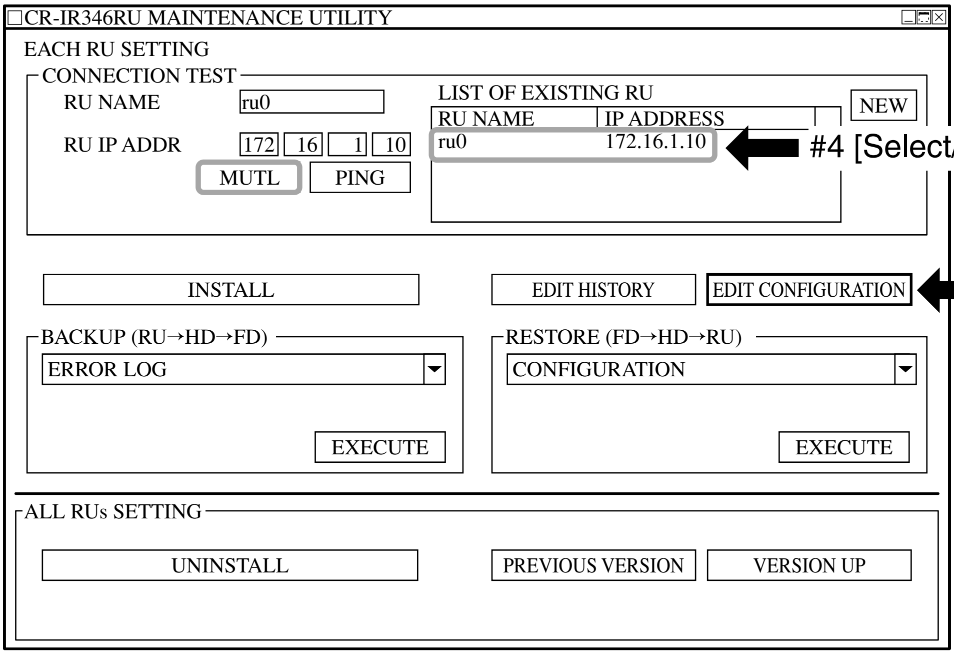

Run
?
#2 [Type]
#3 [Click]
OK
Cancel
Browse...

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: "C:\ProgramFiles\FujiFilm\FCR\Tool\cr346uty.exe"

FR6H4A65.EPS

RU SERVICE UTILITY window


☐CR-IR346RU MAINTENANCE UTILITY
EACH RU SETTING
CONNECTION TEST
LIST OF EXISTING RU
NEW
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
BACKUP (RU→HD→FD)
RESTORE (FD→HD→RU)
EXECUTE
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP

RU NAME: ru0

RU IP ADDR: 172 . 16 . 1 . 10

RU NAME	IP ADDRESS
ru0	172.16.1.10

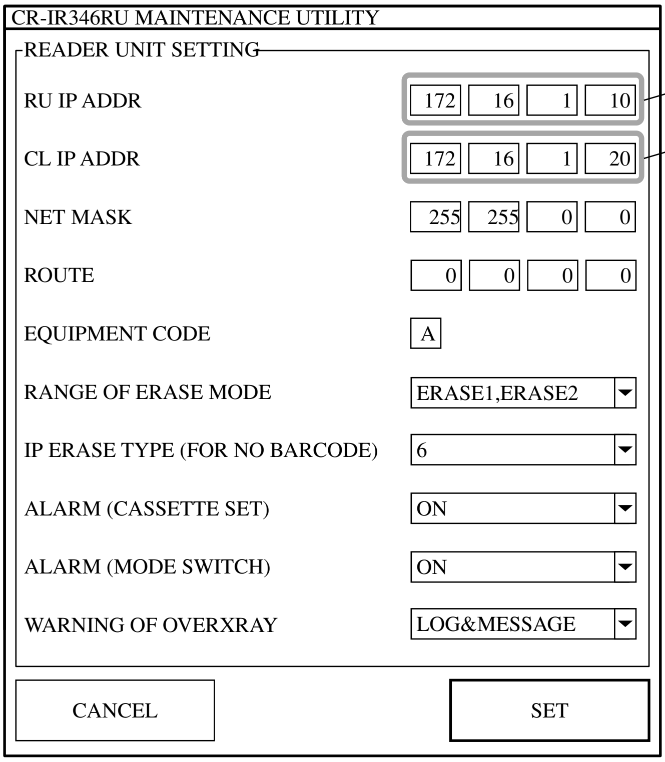
BACKUP (RU→HD→FD): ERROR LOG

RESTORE (FD→HD→RU): CONFIGURATION

#4 [Select/Click]

#5 [Select/Click]

EDIT CONFIGURATION window


CR-IR346RU MAINTENANCE UTILITY
READER UNIT SETTING
CANCEL
SET

RU IP ADDR	172 16 1 10
CL IP ADDR	172 16 1 20
NET MASK	255 255 0 0
ROUTE	0 0 0 0
EQUIPMENT CODE	A
RANGE OF ERASE MODE	ERASE1,ERASE2
IP ERASE TYPE (FOR NO BARCODE)	6
ALARM (CASSETTE SET)	ON
ALARM (MODE SWITCH)	ON
WARNING OF OVERXRAY	LOG&MESSAGE

IP address of RU (default setup value)

IP address of CL (default setup value)

FR6H4A66.EPS

(3) Verify the IP address/NET MASK of the RU and CL.

(4) If the default setting is not used, take note of the values for “RU IP ADDR”, “CL IP ADDR”, and “NET MASK”.

[2] Check the software version and back up HISTORY LOG

◆ *INSTRUCTIONS* ◆

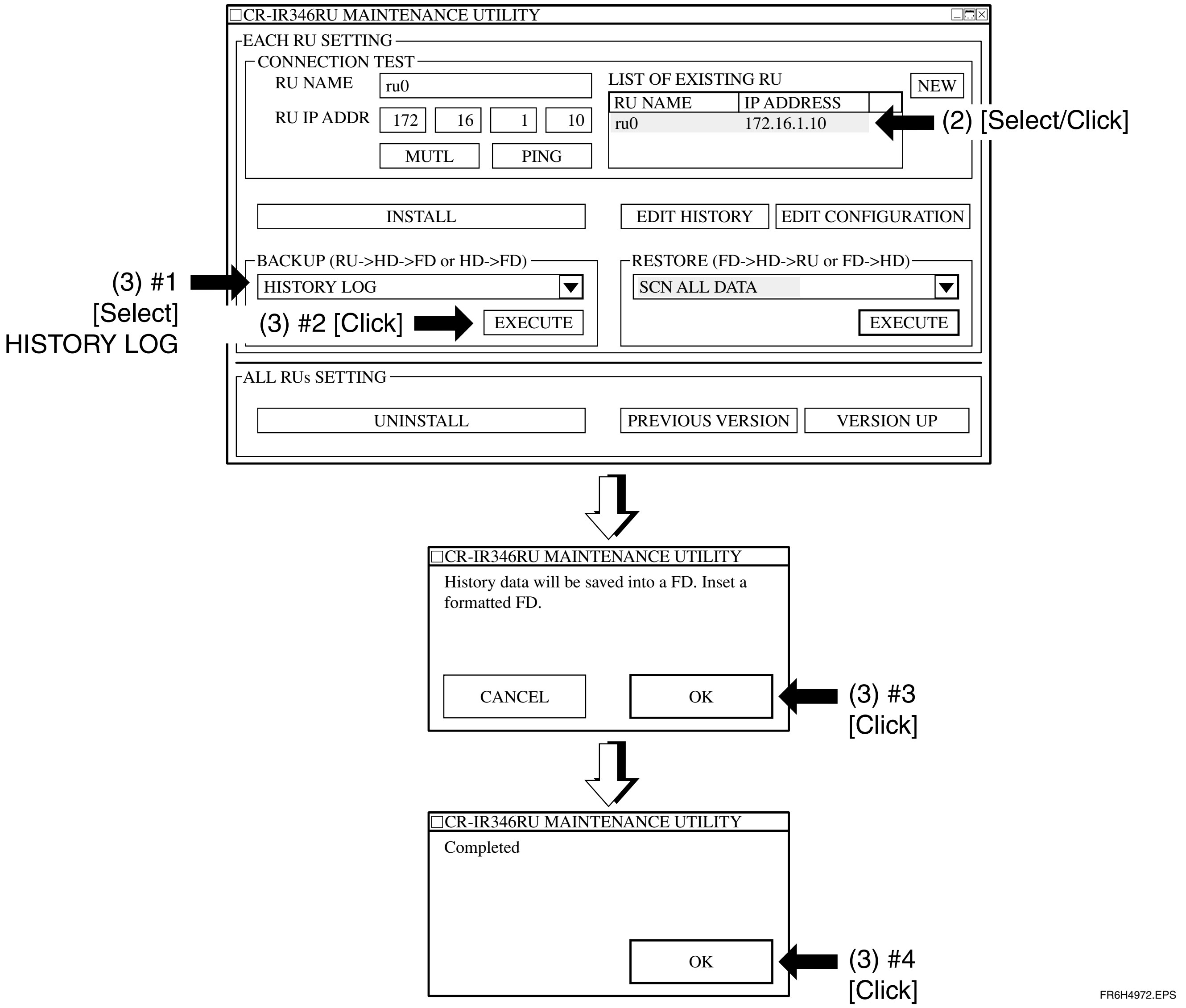
- *If the software version of the RU is A02 or earlier, update the software version to A03 or later before replacing the CPU12A board.*
  ☞ "13. Version Updating Procedures"
- *Back up HISTORY DATA on the CPU12A board. Execute the backup in accordance with the instructions presented below.*

(1) Insert a blank floppy disk into the FD drive.

(2) Open the CR-IR346RU MAINTENANCE UTILITY window and select a relevant RU from "LIST OF EXISTING RU".

(3) Back up HISTORY LOG.

MAINTENANCE UTILITY window


CR-IR346RU MAINTENANCE UTILITY
EACH RU SETTING
CONNECTION TEST
LIST OF EXISTING RU
NEW
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
BACKUP (RU->HD->FD or HD->FD)
RESTORE (FD->HD->RU or FD->HD)
EXECUTE
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP
CR-IR346RU MAINTENANCE UTILITY
CANCEL
OK
CR-IR346RU MAINTENANCE UTILITY
OK
FR6H4972.EPS

RU NAME: ru0

RU IP ADDR: 172 16 1 10

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP: HISTORY LOG

RESTORE: SCN ALL DATA

(2) [Select/Click]

(3) #1 [Select] HISTORY LOG

(3) #2 [Click]

History data will be saved into a FD. Inset a formatted FD.

(3) #3 [Click]

Completed

(3) #4 [Click]

(4) Power OFF the RU.

[3] Remove and Reinstall the CPU12A board

■ Removal Procedures

(1) Remove the covers.

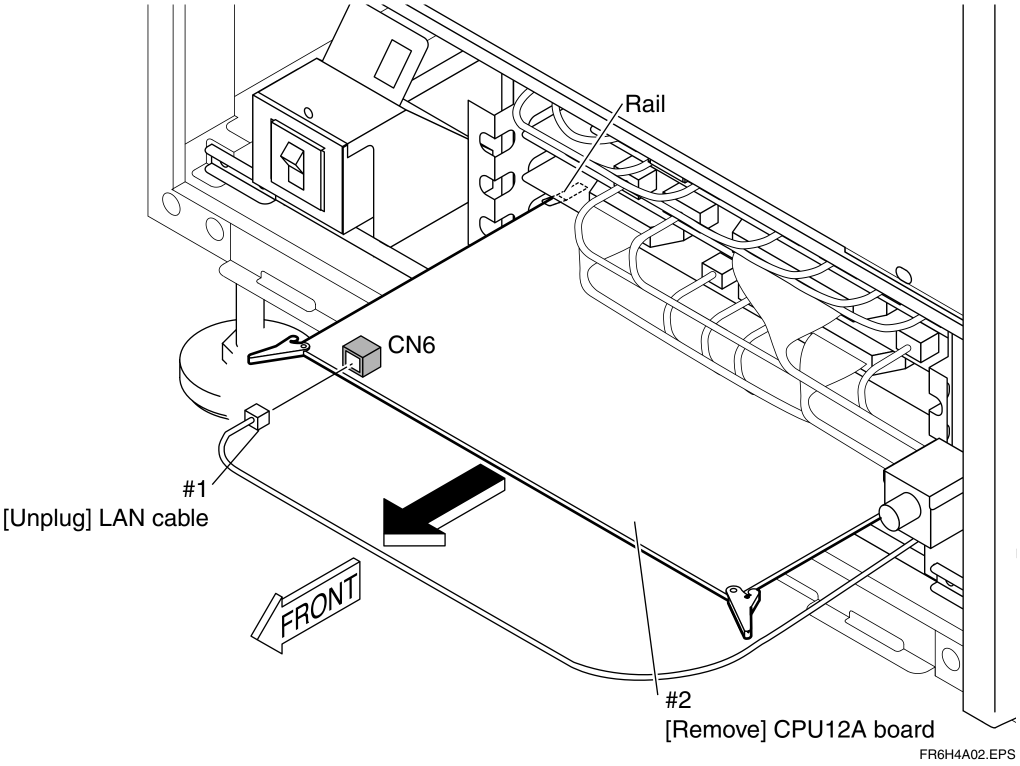
- Front cover
- Lower light protect plate

☞ "3.1 Removing and Reinstalling the Covers"

(2) Remove the support plate (board retainer).

☞ "11.1 Controller"

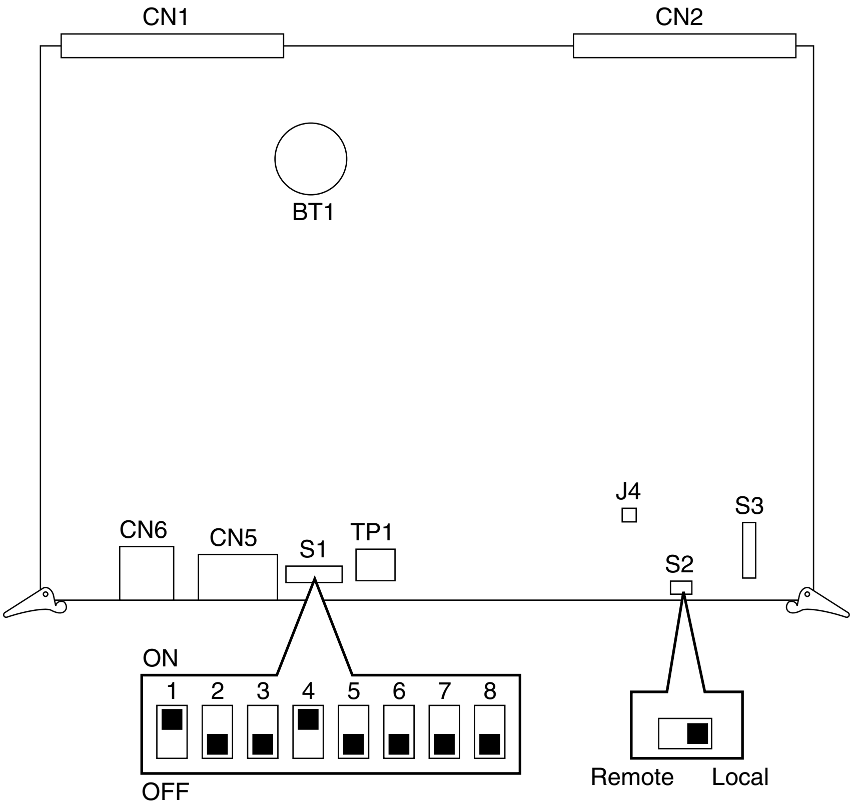
(3) Remove the CPU12A board.


Rail
CN6
#1
[Unplug] LAN cable
FRONT
#2
[Remove] CPU12A board
FR6H4A02.EPS

■ DIP switch settings

◆ *INSTRUCTION* ◆

If the CPU12A board is replaced, make DIP switch settings as appropriate.



S1 settings

bit	Description	ON	OFF	Default (factory preset)
1	Service terminal connection enable/disable	—	—	ON (fixed)
2	For design analysis	—	—	OFF (fixed)
3	Cassette type selection	Metric	INCH	OFF (It varies depending on the specifications prior to shipment.)
4	Barcode reader availability selection	With BCR	Without BCR	ON
5	For design analysis	—	—	OFF (fixed)
6	Not used			OFF (fixed)
7	Not used			OFF (fixed)
8	For design analysis	—	—	OFF (fixed)

S2 settings

Description	Remote	Local	Default
Interlink with CL	—	—	Local (fixed)

FR6H4A03.EPS

■Reinstallation Procedures

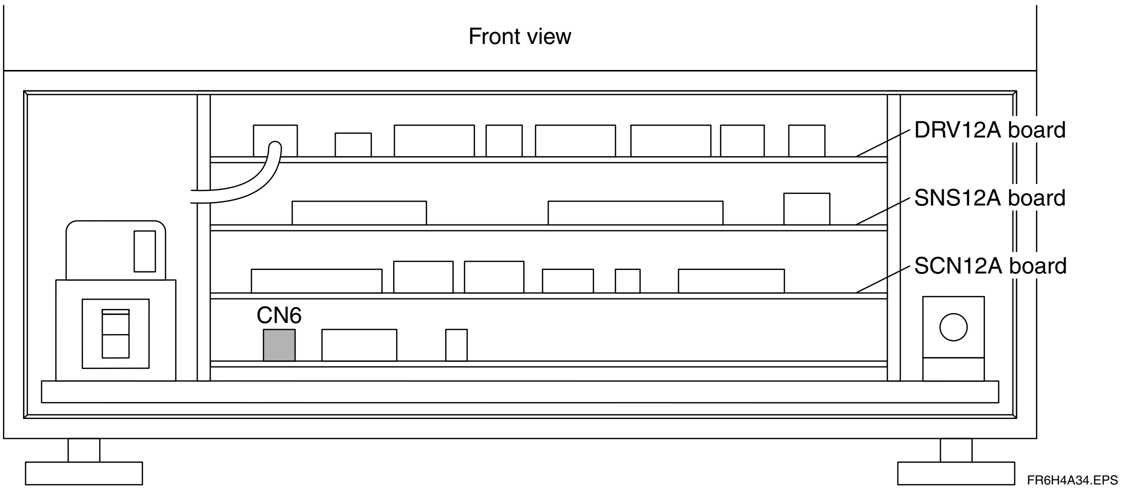
◆ NOTE ◆

When installing the CPU12A board, mount it along the rail.

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedure

- Make sure that the connector is connected to its correct location.


Front view
DRV12A board
SNS12A board
SCN12A board
CN6
FR6H4A34.EPS

[4] Change the CL (IP adress/NETMASK)

■ Changing the CL (IP Address/NET MASK) (from User Setting to Default Setting)

◆ *NOTES* ◆

- *When the CPU12A board is replaced with a new one, it is necessary to change the IP address and NET MASK settings of the CL.*
- *For the machine where the IP address of the CL has been set at its default value, it is unnecessary to perform the procedures described here.*

(1) Power ON the RU.

(2) Switch the CL screen to the desktop screen.

◇ *REFERENCE* ◇

To switch the CL screen to the desktop screen, hold down the <SHIFT> key and select "Shut Down" from the "FUJI FILM" menu.

(3) Double-click My Computer on the desktop.

➪ The "My Computer" window opens.

(4) Double-click Control Panel.

➪ The "Control Panel" window opens.

(5) Double-click Network and Dial-up Co... .

➪ The “Network and Dial-up connection” window opens.

(6) Double-click Local Area Connection .

➪ The “Local Area Connection” window opens.

◇ REFERENCE ◇

On Windows 2000, the “Local Area Connection” icon may not appear on the display if your PC is not connected to other equipment (RU) with a network cable.

(7) Click Properties .

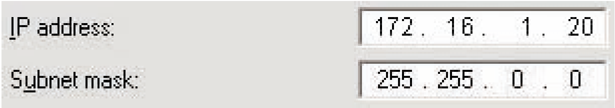
➪ The “Local Area Connection Properties” window opens.

(8) Choose ☑ Internet Protocol (TCP/IP) and then click Properties .

➪ The “Internet Protocol (TCP/IP) Properties” window opens.

(9) Choose ● Use the following IP address: .

(10) Perform the following setup steps:



IP address: 172 . 16 . 1 . 20

Subnet mask: 255 . 255 . 0 . 0

LB00000430.EPS

(11) Click OK .

➪ You are returned to the “Local Area Connection Properties” window.

(12) Click OK .

➪ The system returns to the desktop screen.

◇ REFERENCE ◇

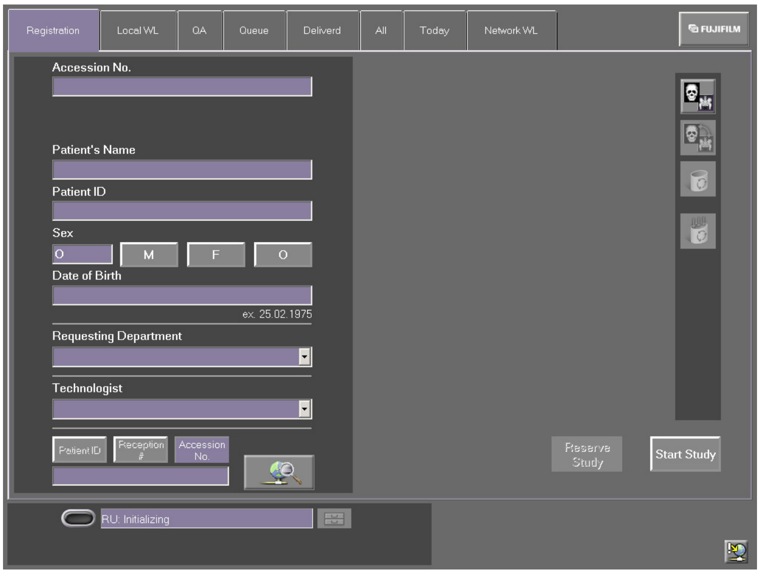
When a window appears prompting you to restart the system, click [Yes].
Once the OS has started, the CL-AP will start up automatically.

■ Verifying the connection after IP address changes

(1) Click **Start** and then sequentially choose “Programs”, “Fuji Film”, and “FCR”.

➩ The CL-AP starts up in about one minute.

The RU initialization message appears on the CL monitor. The RU becomes available in about one minute.


Registration
Local WL
QA
Queue
Deliverd
All
Today
Network WL
FUJIFILM
Accession No.
Patient's Name
Patient ID
Sex
O
M
F
O
Date of Birth
ex. 25.02.1975
Requesting Department
Technologist
Patient ID
Reception #
Accession No.
Reserve Study
Start Study

RU: Initializing

00000195.EPS

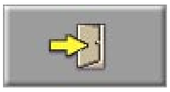
(2) From the CL user window (Registration), set patient data and exposure menu, and then click **Start Study**.

➩ Both the CL-AP window lamp and the RU panel’s cassette insertion lamp go on.

(3) Set the cassette in the RU's cassette setting unit and make sure that images are transferred to the CL.

◇ *REFERENCE* ◇

Be sure not to incorrectly enter an IP address for "NETWORK CONFIG" – "ALL OTHER NODES" – "ru0" settings, otherwise an image transfer error will be indicated.

(4) Click  at the upper right corner of the window.

(5) Click .

➪ A menu opens.

(6) Hold down the <Shift> key and click .

➪ The CL-AP exits.

■ Changing the CL (IP Address/NET MASK) (from Default Setting to User Setting)

(1) Double-click My Computer on the desktop.

➪ The “My Computer” window opens.

(2) Double-click Control Panel.

➪ The “Control Panel” window opens.

(3) Double-click Network and Dial-up Co... .

➪ The “Network and Dial-up connection” window opens.

(4) Double-click Local Area Connection.

➪ The “Local Area Connection” window opens.

◇ ***REFERENCE*** ◇

On Windows 2000, the “Local Area Connection” icon may not appear on the display if your PC is not connected to other equipment (RU) with a network cable.

(5) Click Properties.

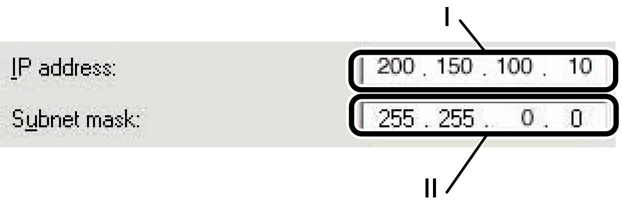
➪ The “Local Area Connection Properties” window opens.

(6) Choose ☑ Internet Protocol (TCP/IP) and then click Properties.

➪ The “Internet Protocol (TCP/IP) Properties” window opens.

(7) Choose ● Use the following IP address:.

(8) Change the IP address to the user setting that has been noted at "■ Checking the IP Addresses of the CL and RU".



IP address: 200 . 150 . 100 . 10

Subnet mask: 255 . 255 . 0 . 0

00000430.EPS

I. Enter the IP address of the CL that has been set by the user (example: 200.150.100.10).

II. Enter a subnet mask.

(9) Click OK.

➪ You are returned to the "Local Area Connection Properties" window.

(10) Click OK.

➪ The system returns to the desktop screen.

◇ ***REFERENCE*** ◇

When a window appears prompting you to restart the system, click [Yes].
Once the OS has started, the CL-AP will start up automatically.

■ Checking Connection After Changing the IP Address

(1) Check the connection.

☞ "[4] Change the CL (IP address/NET MASK), ■ Checking Connection After Changing the IP Address"

[5] Install the application software and configuration data

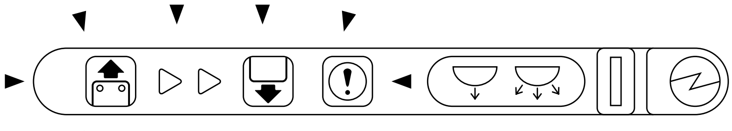
◆ ***NOTES*** ◆

- *If the software versions of the flash ROM on the CPU12A board and the HDD on the CL are identical, the application software install operation at step (2) is not performed.*
- *If the contents of the flash ROM on the CPU12A board and the HDD on the CL are identical, the configuration data install operation at steps (2) and (3) is not performed.*

(1) Power OFF the RU and then back ON.

◇ ***REFERENCE*** ◇

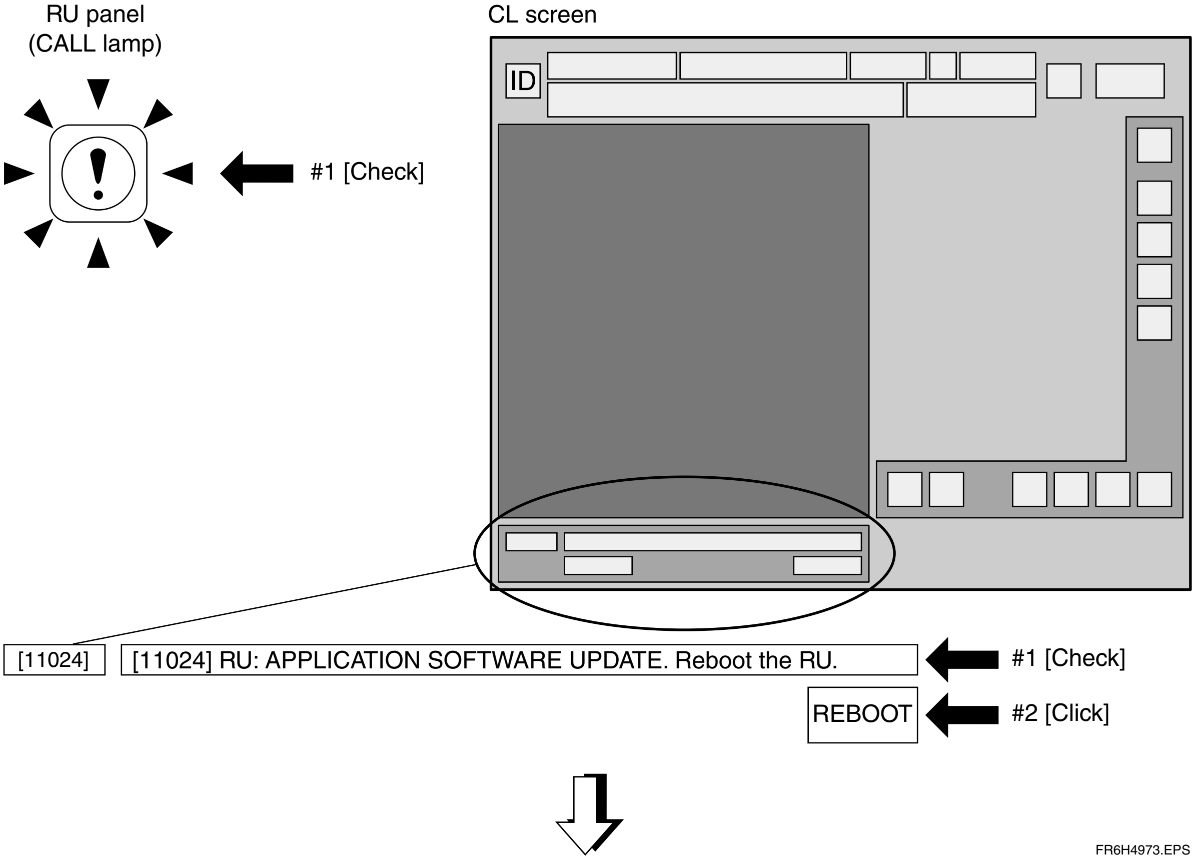
When the RU is powered OFF and then back ON, the installation of the application software and configuration data from the CL is initiated.
At this time, all the indicators on the panel of the RU are illuminated, and an audible alarm is generated.



FR6H4D04.EPS

(2) Verify that the RU call lamp is illuminated, with [11024] displayed on the CL screen, and restart the RU from the CL screen.

When it is restarted, the RU is power OFF and then back ON with all indicators on the panel illuminated, and an audible alarm (three short beeps) is generated.

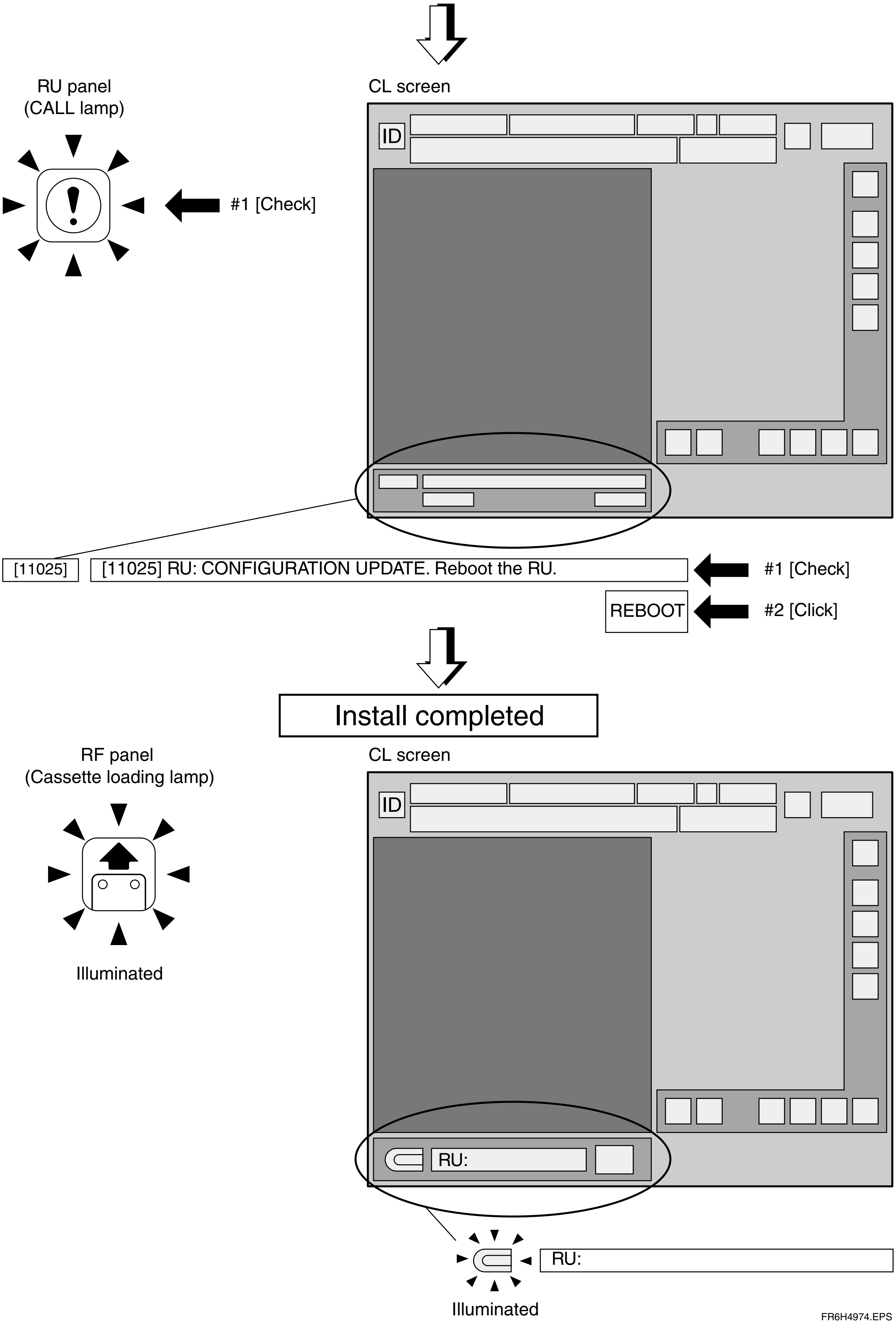


[11024] RU: APPLICATION SOFTWARE UPDATE. Reboot the RU.

FR6H4973.EPS

(3) Verify that the RU call lamp is illuminated, with [11025] displayed on the CL screen, and restart the RU from the CL screen.

When it is restarted, all the indicators on the panel are illuminated, and an audible alarm is generated.


RU panel
(CALL lamp)
#1 [Check]
CL screen
ID
[11025]
#1 [Check]
REBOOT
#2 [Click]
RF panel
(Cassette loading lamp)
Illuminated
CL screen
ID
RU:
RU:
Illuminated

[11025] RU: CONFIGURATION UPDATE. Reboot the RU.

Install completed

FR6H4974.EPS

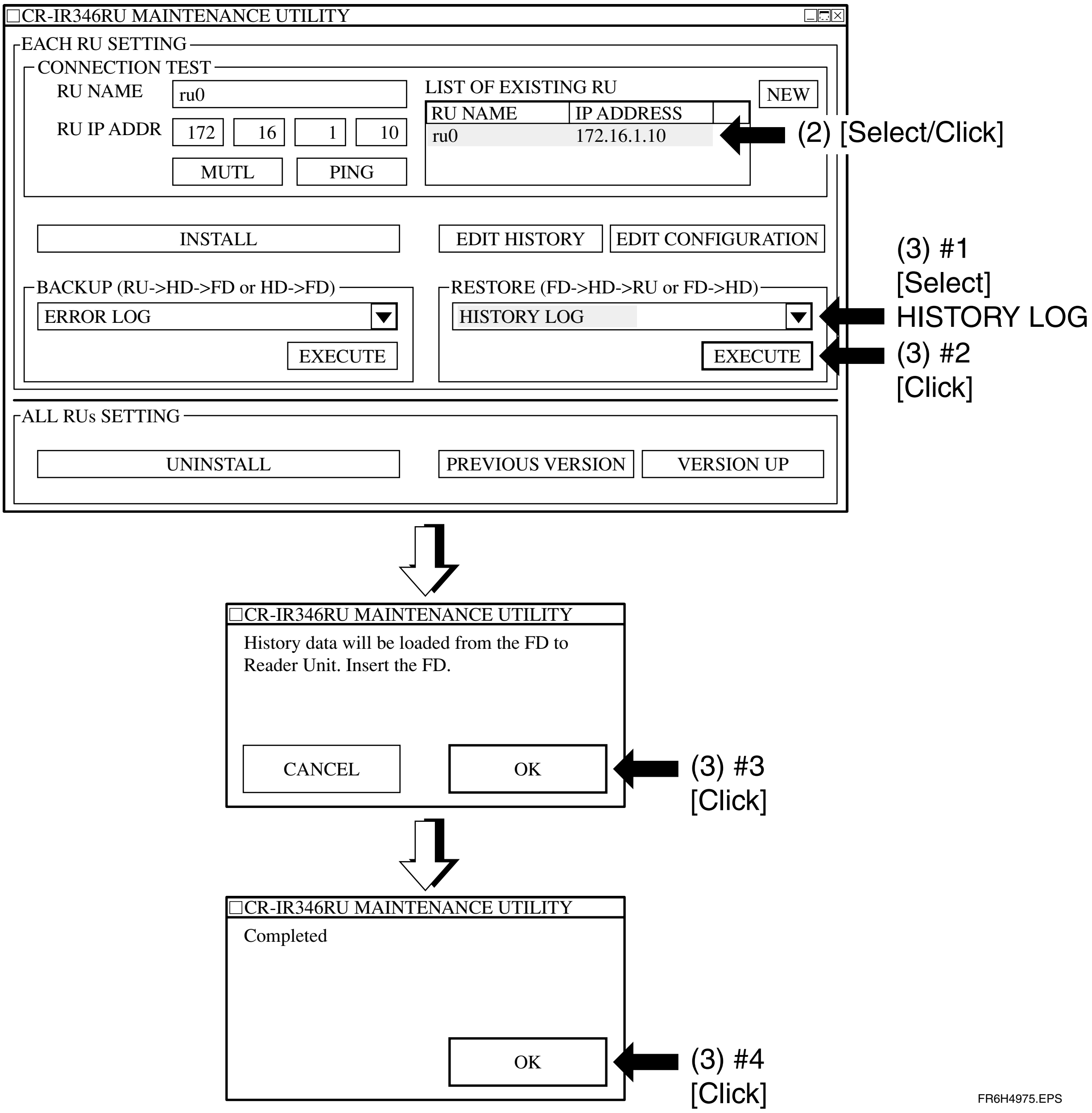
[6] Restore HISTORY LOG

(1) Put into the FD drive the floppy disk containing HISTORY LOG that has backed up before replacing the CPU12A board.

(2) Open the CR-IR346RU MAINTENANCE UTILITY window and select a relevant RU from the "LIST OF EXISTING RU".

(3) Restore HISTORY LOG.

MAINTENANCE UTILITY window



☐CR-IR346RU MAINTENANCE UTILITY

EACH RU SETTING

CONNECTION TEST

RU NAME: ru0

RU IP ADDR: 172 . 16 . 1 . 10

LIST OF EXISTING RU

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD or HD->FD): ERROR LOG

RESTORE (FD->HD->RU or FD->HD): HISTORY LOG

ALL RUs SETTING

☐CR-IR346RU MAINTENANCE UTILITY

History data will be loaded from the FD to Reader Unit. Insert the FD.

☐CR-IR346RU MAINTENANCE UTILITY

Completed

NEW
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
EXECUTE
EXECUTE
UNINSTALL
PREVIOUS VERSION
VERSION UP
CANCEL
OK
OK

(2) [Select/Click]

(3) #1 [Select] HISTORY LOG

(3) #2 [Click]

(3) #3 [Click]

(3) #4 [Click]

FR6H4975.EPS

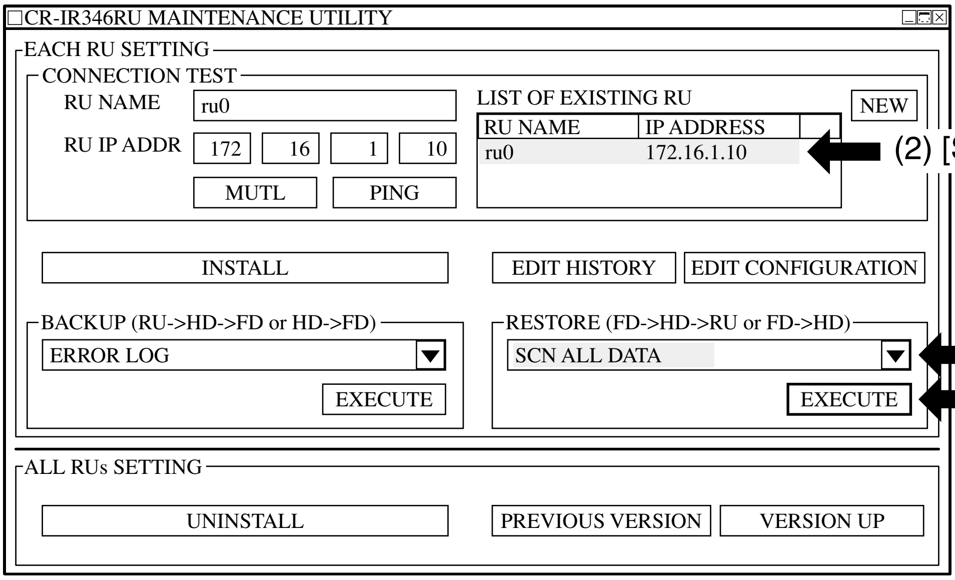
[7] Restore SCN ALL DATA

(1) Put the machine-specific data floppy disk into the FD drive.

(2) Open the CR-IR346RU MAINTENANCE UTILITY window and select a relevant RU from the “LIST OF EXISTING RU”.

(3) Restore SCN ALL DATA.

MAINTENANCE UTILITY window



☐CR-IR346RU MAINTENANCE UTILITY

RU NAME: ru0

RU IP ADDR: 172 16 1 10

RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD or HD->FD): ERROR LOG

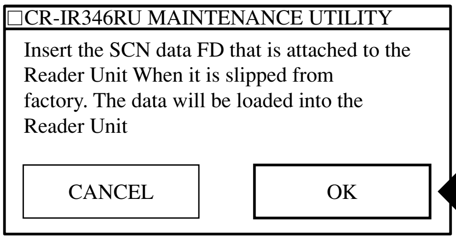
RESTORE (FD->HD->RU or FD->HD): SCN ALL DATA

EACH RU SETTING
CONNECTION TEST
LIST OF EXISTING RU
NEW
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
EXECUTE
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP

(2) [Select/Click]

(3) #1 [Select] SCN ALL DATA

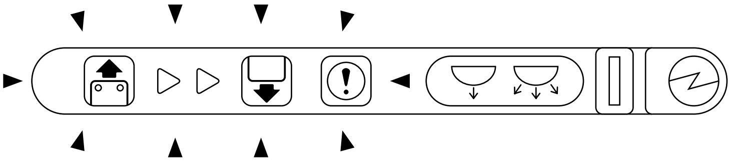
(3) #2 [Click]



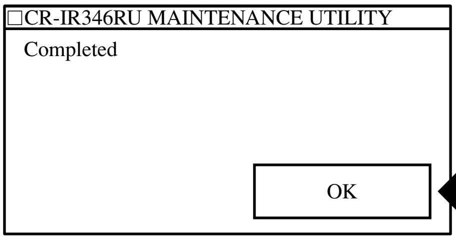
☐CR-IR346RU MAINTENANCE UTILITY

Insert the SCN data FD that is attached to the Reader Unit When it is slipped from factory. The data will be loaded into the Reader Unit

(3) #3 [Click]



(3) #4 [Click]



☐CR-IR346RU MAINTENANCE UTILITY

Completed

(3) #5 [Click]

FR6H4A38.EPS

[8] Check and change the RU (IP address/NET MASK)

◆ INSTRUCTION ◆

Check the RU (IP address/NET MASK), and if its setting differs from the user setup value, change it as appropriate.

■ Changing the RU Configuration File (from Default Setting to User Setting)

◇ REFERENCE ◇

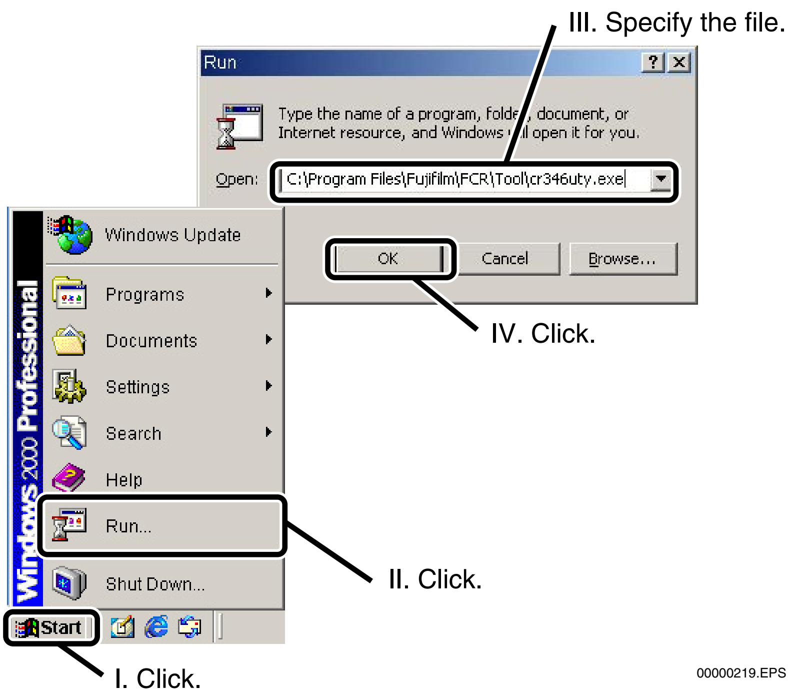
Here, the IP address and NET MASK of the RU that have been set by the user are set on the RU.

(1) Turn ON the RU power.

(2) Start the RU M-Utility as directed below:

◆ NOTE ◆

AP such as the CL-AP, Service Utility etc. or the Explorer should have not been started. If already started, shut it down.



III. Specify the file.

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: C:\Program Files\Fujifilm\FCR\Tool\cr346uty.exe

IV. Click.

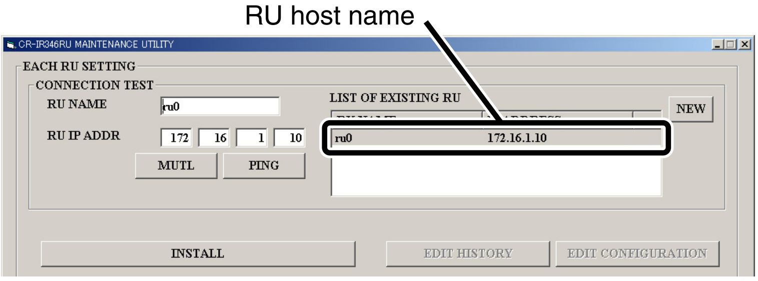
II. Click.

I. Click.

Run
? X
OK
Cancel
Browse...
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start
Windows 2000 Professional
00000219.EPS

➪ The RU M-Utility main menu opens.

(3) From the “LIST OF EXISTING RU” area, click the host name of the RU whose configuration file is to be set.



RU host name

CR-IR346RU MAINTENANCE UTILITY

EACH RU SETTING

CONNECTION TEST

RU NAME: ru0

RU IP ADDR: 172 . 16 . 1 . 10

LIST OF EXISTING RU

ru0 172.16.1.10

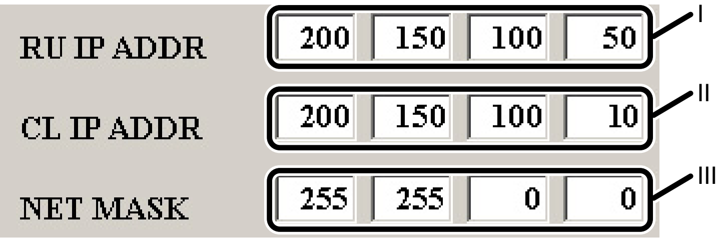
00000434.EPS

➪ The text color of the “EDIT CONFIGURATION” button changes from gray to black.

(4) Click **EDIT CONFIGURATION**.

➪ The “READER UNIT SETTING” window opens.

(5) Change the IP address and NET MASK to the user settings that have been noted at “[1] Check the IP address/NET MASK of the CL and RU”.



RU IP ADDR: 200 . 150 . 100 . 50

CL IP ADDR: 200 . 150 . 100 . 10

NET MASK: 255 . 255 . 0 . 0

00000429.EPS

I. Enter a new RU IP address (e.g., 200.150.100.50).

II. Enter a new CL IP address (e.g., 200.150.100.10).

III. Enter a net mask.

(6) Click **SET**.

➪ The system saves the settings and returns to the main menu.

(7) Click the ☒ mark at the upper right corner of the window.

➪ The system returns to the desktop screen.

(8) From the **Start** menu, sequentially choose “Programs”, “Fuji Film”, and then “FCR”.

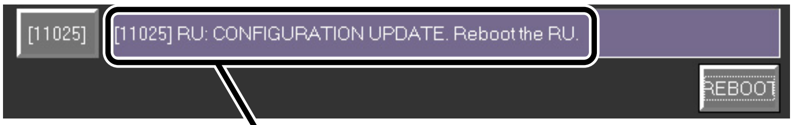
CAUTION

Never power OFF the RU when the panel indicators of the RU are illuminated, because the CPU board of the RU may be damaged.

➩ The CL-AP starts up in about one minute.

The RU-Config file in the RU FLASH ROM will be updated. (The RU LED lights and a beep sounds.)

➩ The CL monitor displays a message indicating that the RU-Config file is being updated.



[11025]

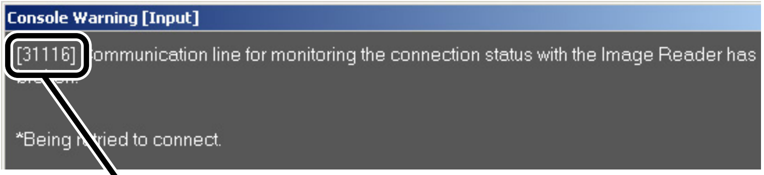
[11025] RU: CONFIGURATION UPDATE. Reboot the RU.

A message appears to indicate that the RU-Config file is being updated.

00000270.EPS

(9) Click **REBOOT** on the CL monitor.

➩ The error window opens in a few seconds.



Console Warning [Input]

[31116] ommunication line for monitoring the connection status with the Image Reader has

*Being r tried to connect.

“31117” or “31118” can eventually be displayed.

00000601.EPS

(10) Click OK.

(11) Click FUJIFILM.

➩ A menu opens.

(12) Hold down the <Shift> key and click Shut Down.

➩ The system returns to the desktop screen.

■ Changing the Settings in Service Utility of CL (from Default Setting to User Setting)

◆ *NOTE* ◆

For the machine where the IP address of the RU has been set at its default value, it is unnecessary to perform the procedures described here.

◇ *REFERENCE* ◇

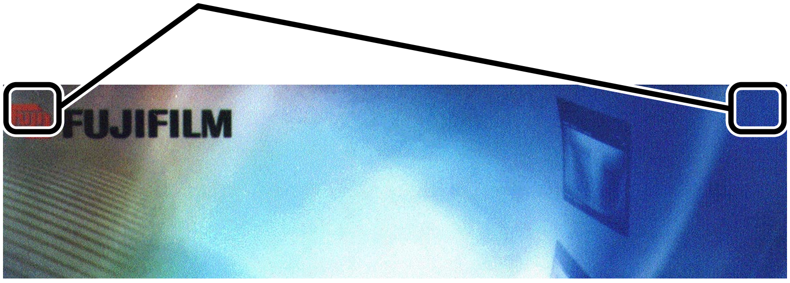
Here, the IP address and NET MASK of the RU that have been set by the user are set on the CL.

(1) Click **Start** and then sequentially choose “Programs”, “Fuji Film”, and “FCR”.

➩ The CL-AP starts up.

(2) Within a period of 5 seconds after the initial window opens, sequentially click the upper left and upper right corners of the window.

Click the upper left corner and then the upper right corner.



00000118.EPS

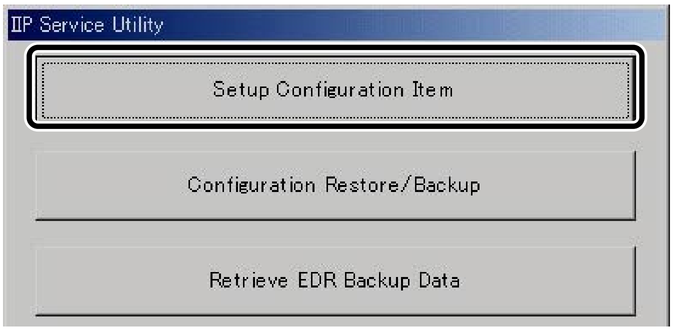
➩ The Service Utility starts. The “IIP Service Utility” window opens.

◇ *REFERENCE* ◇

If you cannot complete step 2 from the initial window within a 5-second period and allow the AP to start up, perform the following steps to start the Service Utility:

1. *To exit the AP, hold down the <Shift> key and choose “Shut Down” on the* **FUJIFILM** *menu.*
2. *From the “Start” menu, sequentially choose “Programs”, “Fuji Film”, and “FCR”.*
3. *When the initial window opens, sequentially click its upper left and upper right corners within a period of 5 seconds.*

(3) Click [Setup Configuration Item].


IIP Service Utility
Setup Configuration Item
Configuration Restore/Backup
Retrieve EDR Backup Data

00000159.EPS

➪ The “Setup Configuration Item” window opens.

(4) Click the ⊞ sign within ⊞ NETWORK CONFIG.

(5) Click the ⊞ sign within ⊞ ALL OTHER NODES and then select ⊞ ru0.

➪ The “HostName” window opens in the right-hand area of the window.

(6) Enter in the IP Address : 172.16.1.10 field the IP address of the RU that has been set by the user (example: 200.150.100.50).

(7) Click Apply.

(8) From the “Config (F)” menu, choose “Save”.

➪ A window opens, prompting you to confirm the setup data to be saved.

(9) Click Yes.

➪ The system saves the setup data.

(10) From the “Config (F)” menu, choose “Close”.

➪ The system returns to the “IIP Service Utility” window.

(11) Click [Exit Service Utility].

➪ The system returns to the desktop screen.

■ Checking Connection After Changing the IP Address

(1) Check the connection.

☞ “[4] Change the CL (IP address/NET MASK), ■ Checking Connection After Changing the IP Address”

[9] Image Checks

(1) Output the image exposed at 1 mR.

☞ "RU Instruction Manual/2. Operating Procedures"

◆ *CHECKS* ◆

- *There should be no offensive noise or odor.*
- *There should be no IP jam.*
- *The IP should be free from any scratch or damage after reading.*

If anything abnormal is found, see [Troubleshooting Volume].

(2) Check the output film and image.

◆ *CHECK* ◆

There should be no unusual nonuniformity.
If anything abnormal is found, see [Troubleshooting Volume].

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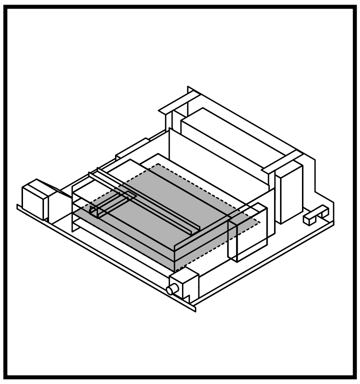
11.3 SCN12A Board



FR6H4A52.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

■ Removal Procedures

(1) Remove the covers.

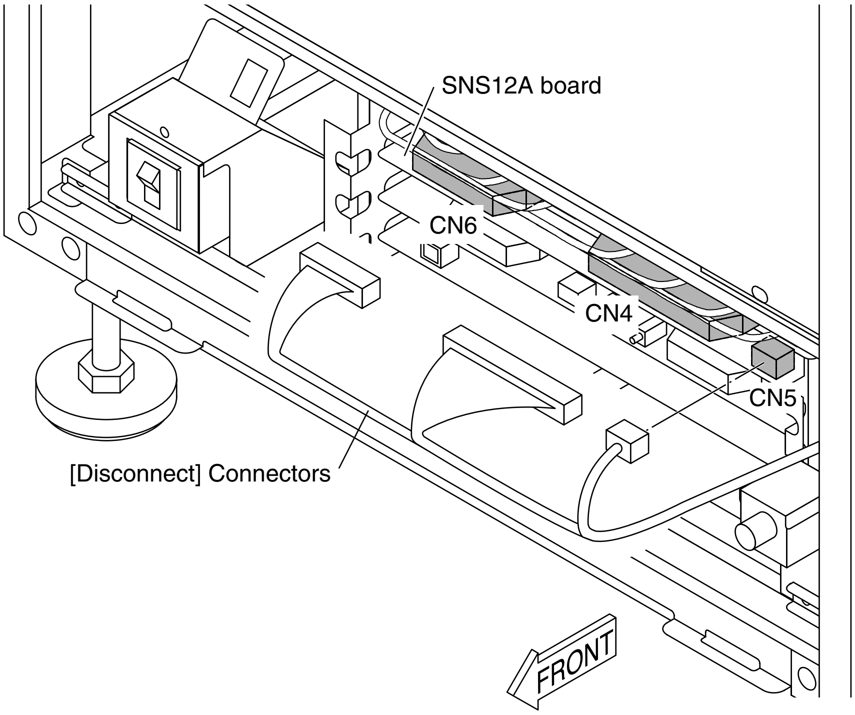
- Front cover
- Lower light protect plate

☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the support plate (board retainer).

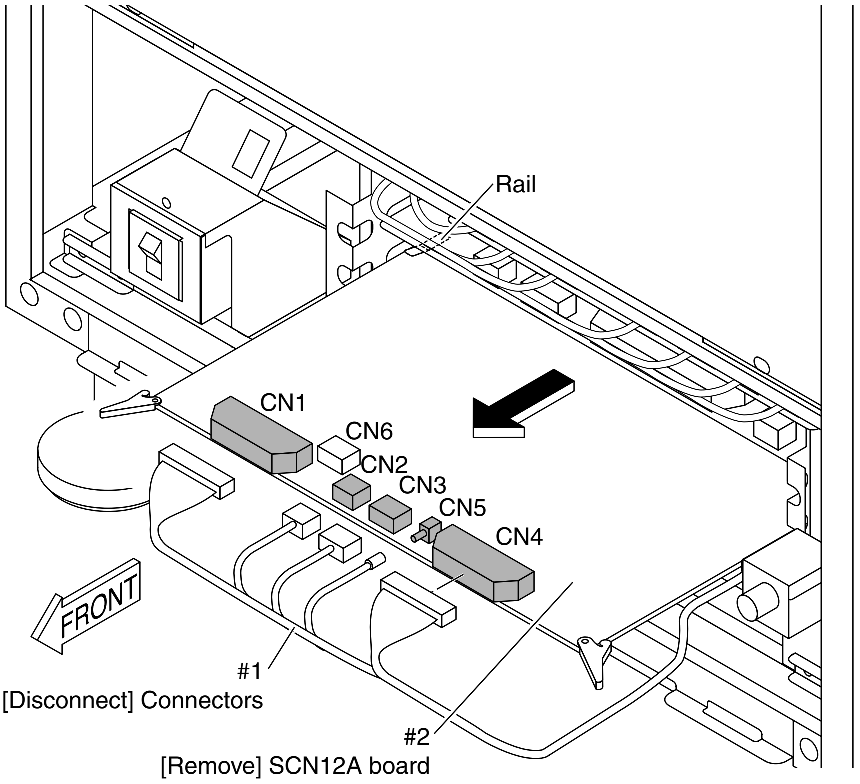
☞ “11.1 Controller”

(3) Disconnect the SNS12A board connectors.



FR6H4A05.EPS

(4) Remove the SCN12A board.


Rail
CN1
CN6
CN2
CN3
CN5
CN4
FRONT
#1
[Disconnect] Connectors
#2
[Remove] SCN12A board

FR6H4A07.EPS

■ Reinstallation Procedures

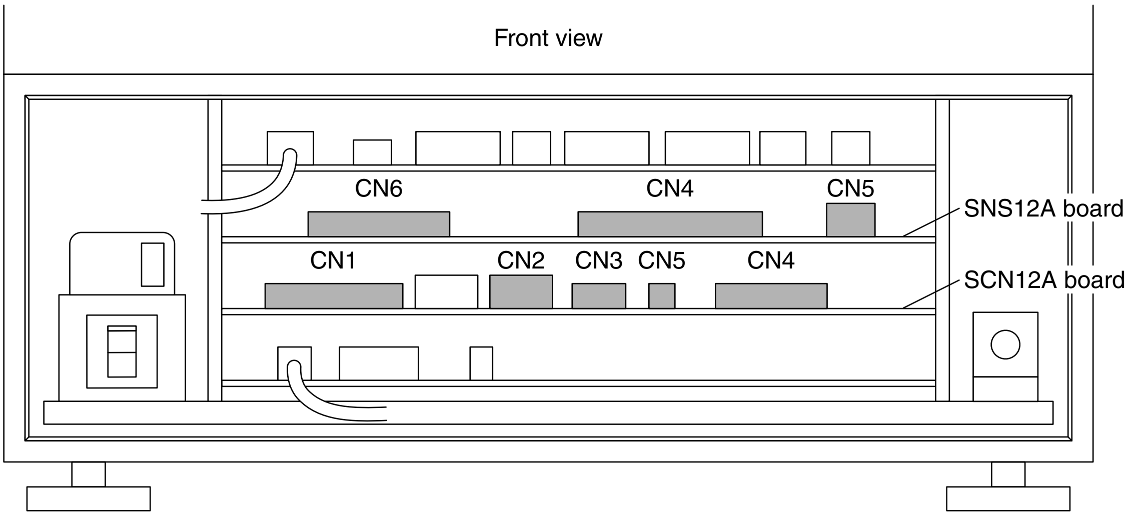
◆ *NOTE* ◆

When installing the SCN12A board, mount it along the rail.

For reinstallation, reverse the removal steps.

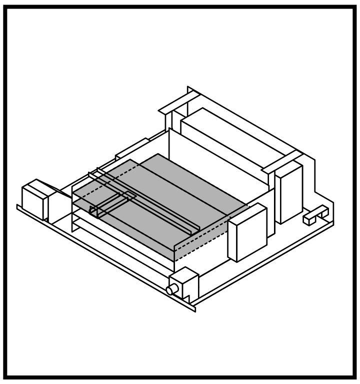
■ Check/Adjustment Procedure

- Make sure that the connectors are connected to their correct locations.


Front view
CN6
CN4
CN5
SNS12A board
CN1
CN2
CN3
CN5
CN4
SCN12A board

FR6H4A35.EPS

11.4 DRV12A-1 Board



FR6H4A53.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

◇ REFERENCE ◇

The SNS12A board and DRV12A board are screwed together, and installed as the DRV12A-1 board to the machine.

■ Removal Procedure

(1) Remove the covers.

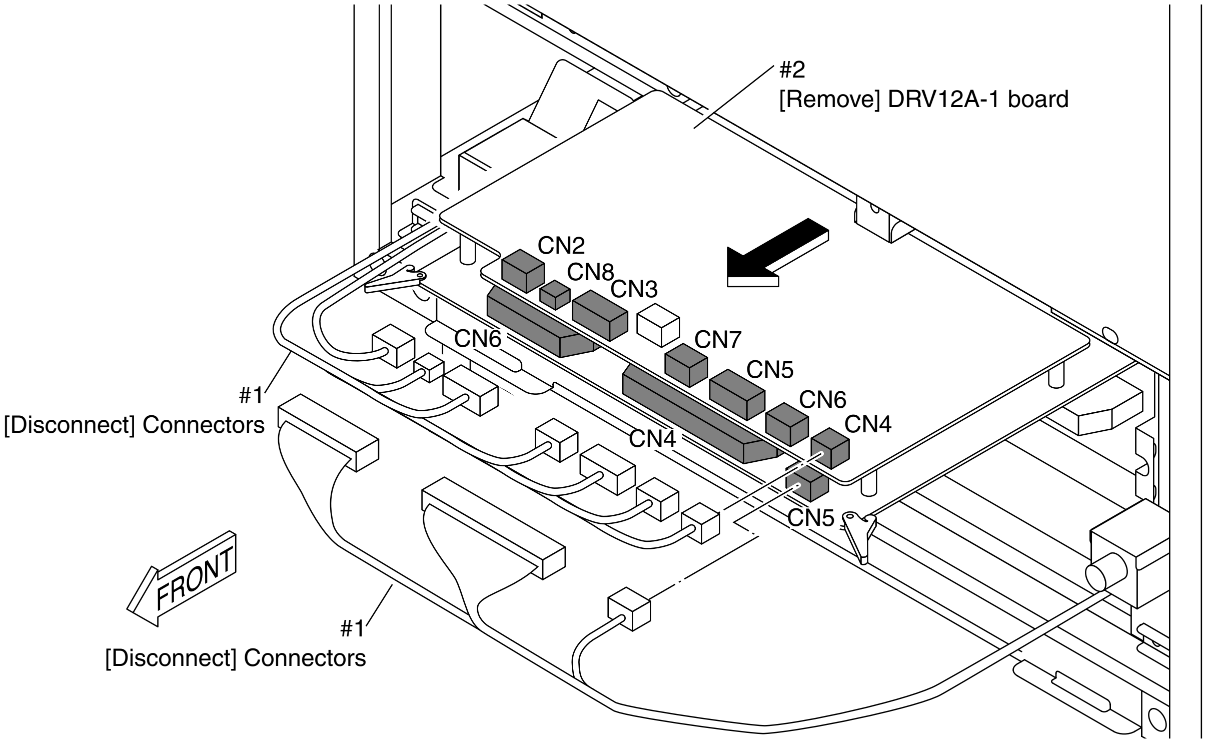
- Front cover
- Lower light protect plate

☞ “3.1 Removing and Reinstalling the Covers”

(2) Remove the support plate (board retainer).

☞ “11.1 Controller”

(3) Remove the DRV12A-1 board.


#2
[Remove] DRV12A-1 board
CN2
CN8
CN3
CN6
CN7
CN5
CN6
CN4
CN4
CN5
#1
[Disconnect] Connectors
FRONT
#1
[Disconnect] Connectors

FR6H4A09.EPS

■ Reinstallation Procedures

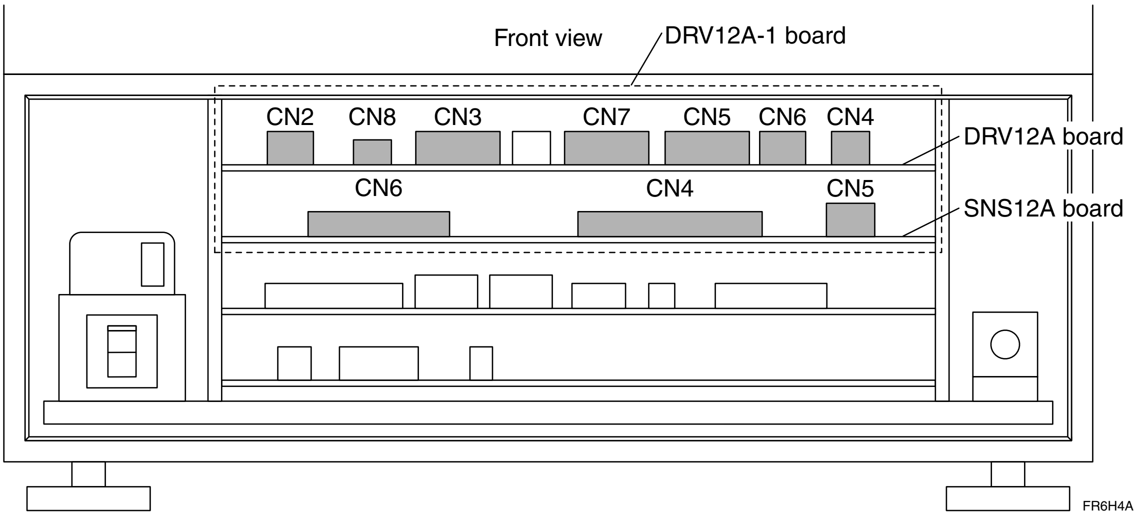
◆ *NOTE* ◆

When installing the DRV12A-1 board, mount it along the rail.

For reinstallation, reverse the removal steps.

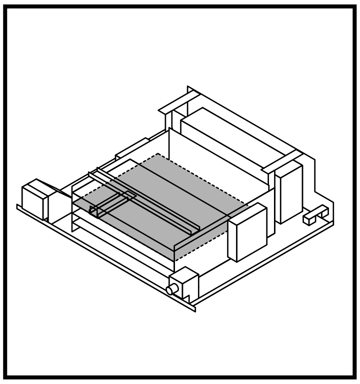
■ Check/Adjustment Procedures

- Make sure that the connectors are connected to their correct locations.


Front view
DRV12A-1 board
CN2
CN8
CN3
CN7
CN5
CN6
CN4
DRV12A board
CN6
CN4
CN5
SNS12A board

FR6H4A36.EPS

11.5 SNS12A Board



FR6H4A54.EPS

CAUTION

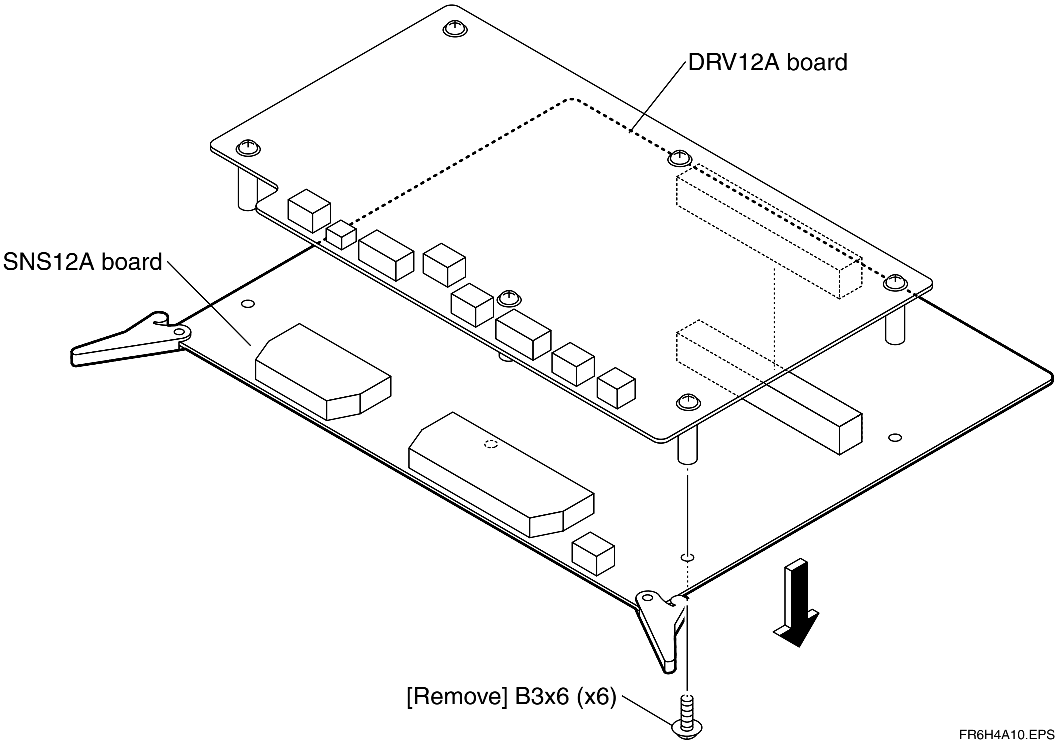
When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

■ Removal Procedures

(1) Remove the DRV12A-1 board.

☞ "11.4 DRV12A-1 Board"

(2) Remove the SNS12A board.

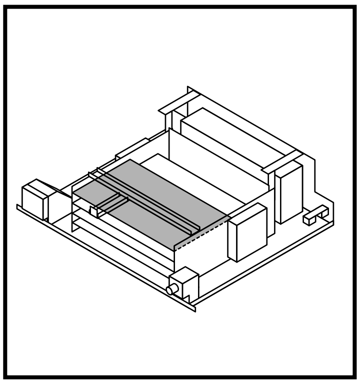


FR6H4A10.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

11.6 DRV12A Board



FR6H4A55.EPS

CAUTION

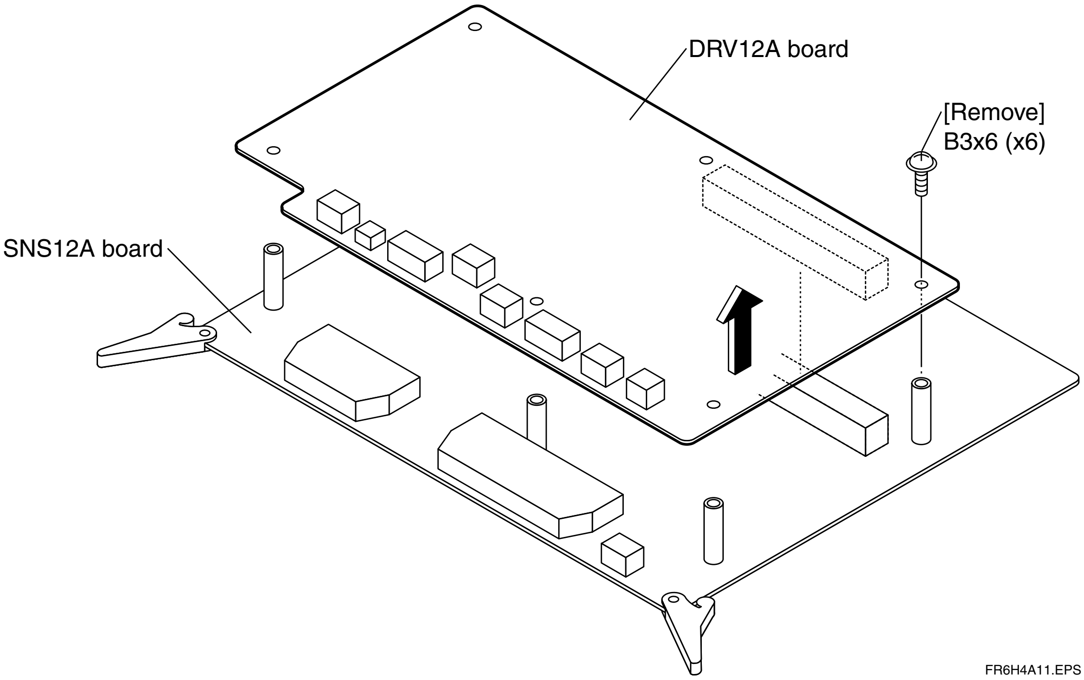
When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

■ Removal Procedures

(1) Remove the DRV12A-1 board.

☞ “11.4 DRV12A-1 Board”

(2) Remove the DRV12A board.

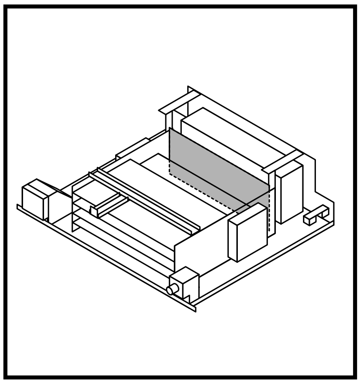


FR6H4A11.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

11.7 MTH12A Board



FR6H4A57.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

■ Removal Procedures

(1) Remove the controller.

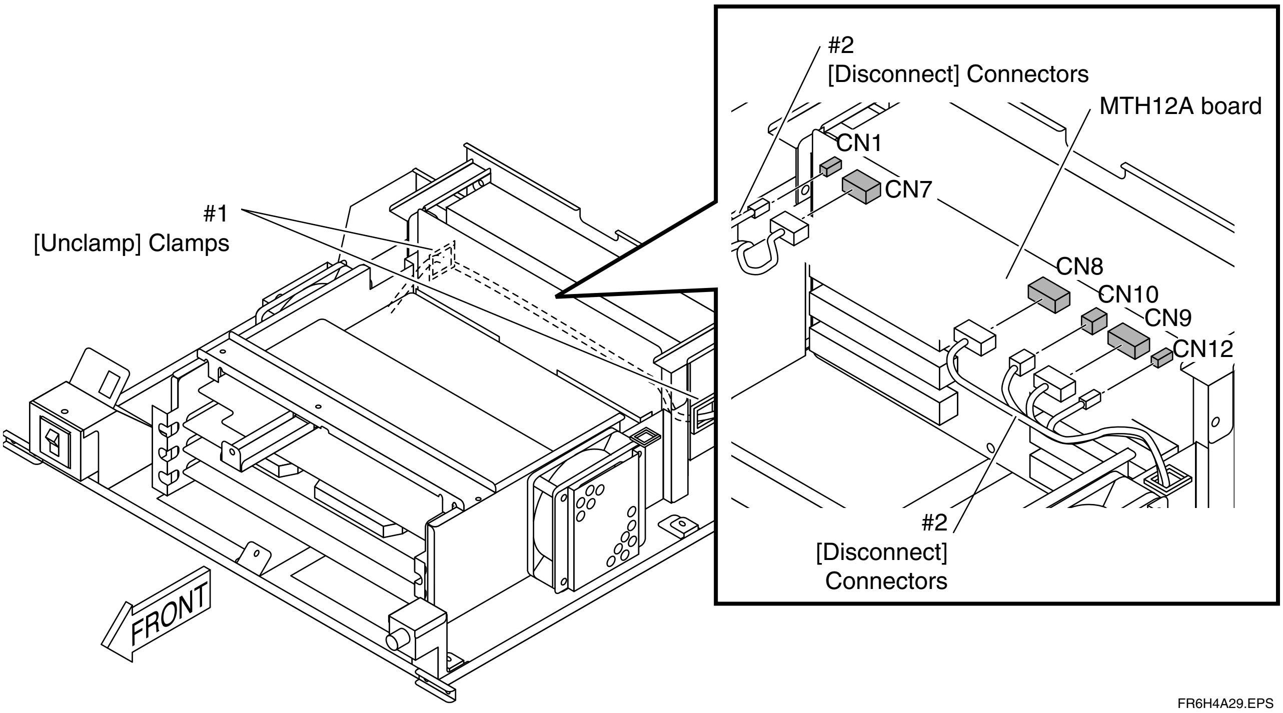
☞ "11.1 Controller"

(2) Remove the boards.

- CPU12A board
- SCN12A board
- DRV12A-1 board

☞ "11.2 CPU12A Board", "11.3 SCN12A Board", "11.4 DRV12A-1 Board"

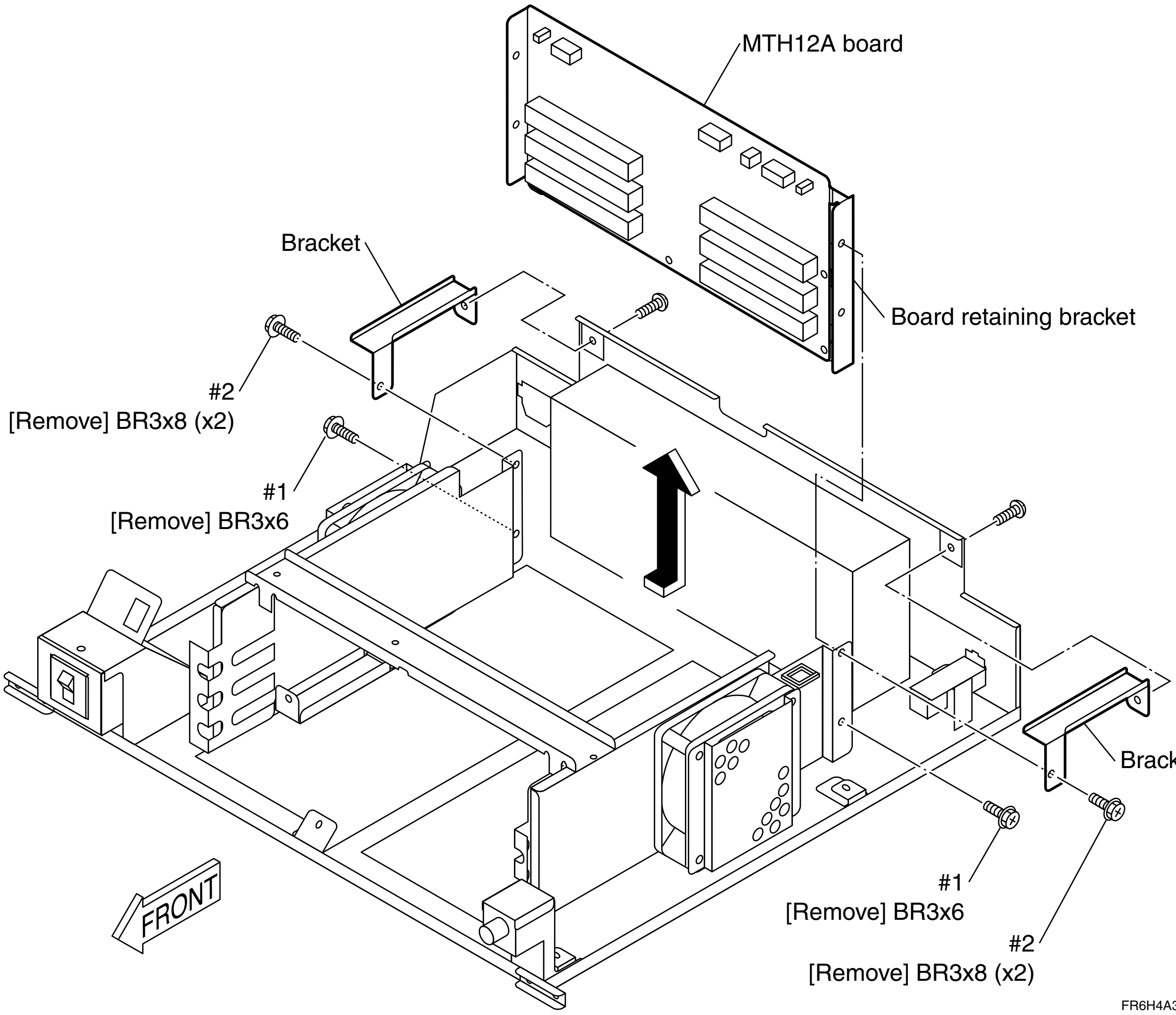
(3) Disconnect the connectors.



#2
[Disconnect] Connectors
MTH12A board
CN1
CN7
#1
[Unclamp] Clamps
CN8
CN10
CN9
CN12
#2
[Disconnect]
Connectors
FRONT

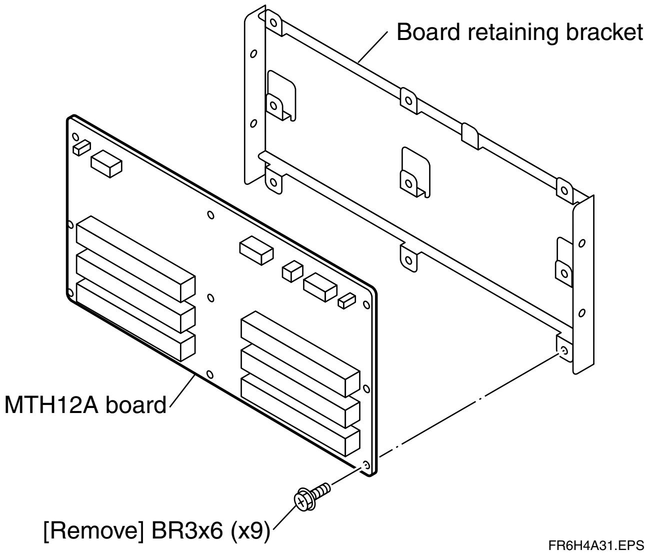
FR6H4A29.EPS

(4) Remove the MTH12A board together with the board retaining bracket.


MTH12A board
Bracket
Board retaining bracket
#2
[Remove] BR3x8 (x2)
#1
[Remove] BR3x6
FRONT
Bracket
#1
[Remove] BR3x6
#2
[Remove] BR3x8 (x2)

FR6H4A30.EPS

(5) Remove the MTH12A board.

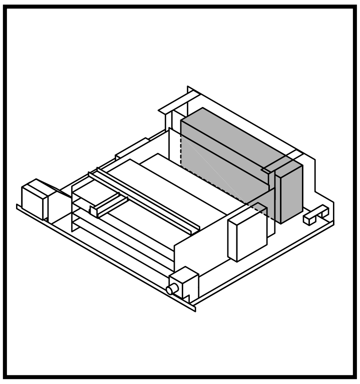

Board retaining bracket
MTH12A board
[Remove] BR3x6 (x9)

FR6H4A31.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

11.8 Power Supply



FR6H4A58.EPS

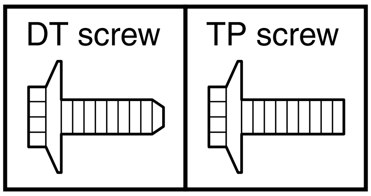
■ Removal Procedures

(1) Remove the controller.

☞ “11.1 Controller”

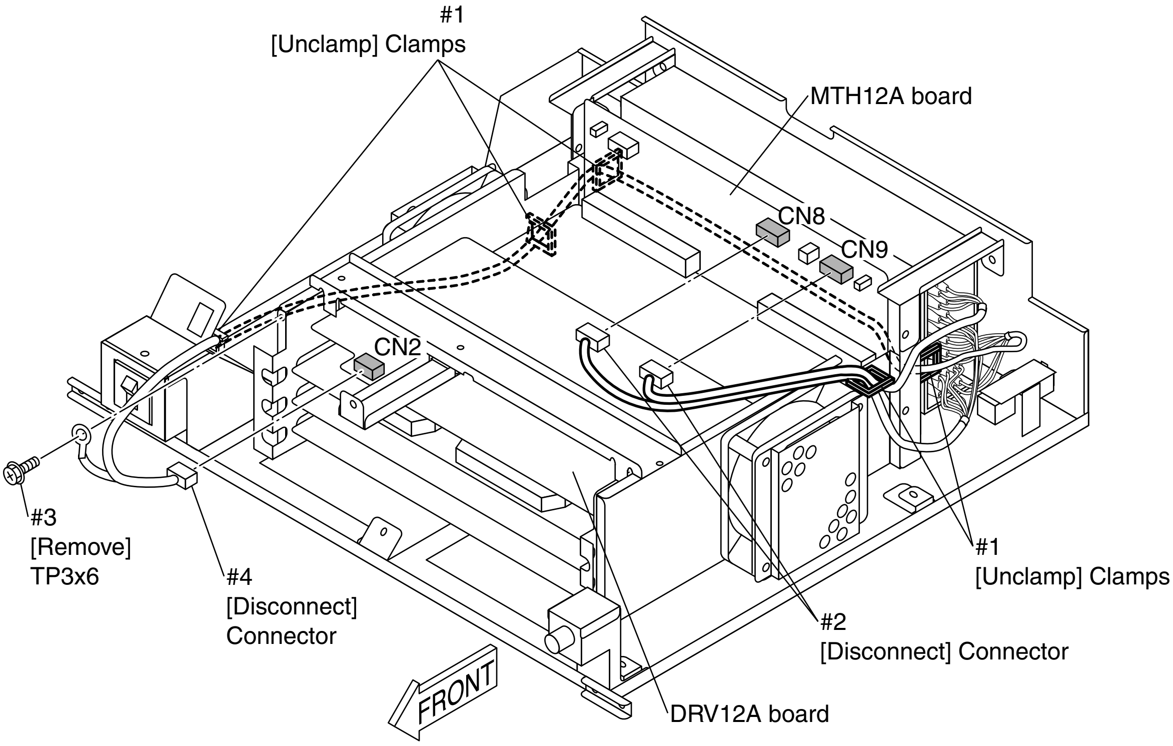
◆ ***NOTE*** ◆

The TP screw used to secure the ground wire is similar in shape to a DT screw. When attaching the screw, check its shape to avoid confusing it with a wrong one.


DT screw
TP screw

FR6H4105.EPS

(2) Disconnect the connectors.


#1
[Unclamp] Clamps
MTH12A board
CN8
CN9
CN2
#3
[Remove]
TP3x6
#4
[Disconnect]
Connector
FRONT
DRV12A board
#2
[Disconnect] Connector
#1
[Unclamp] Clamps

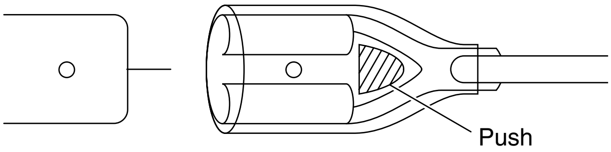
FR6H4A15.EPS

CAUTION

The cable connected to the power supply (marked by CAUTION in the illustration below) should not be detached.

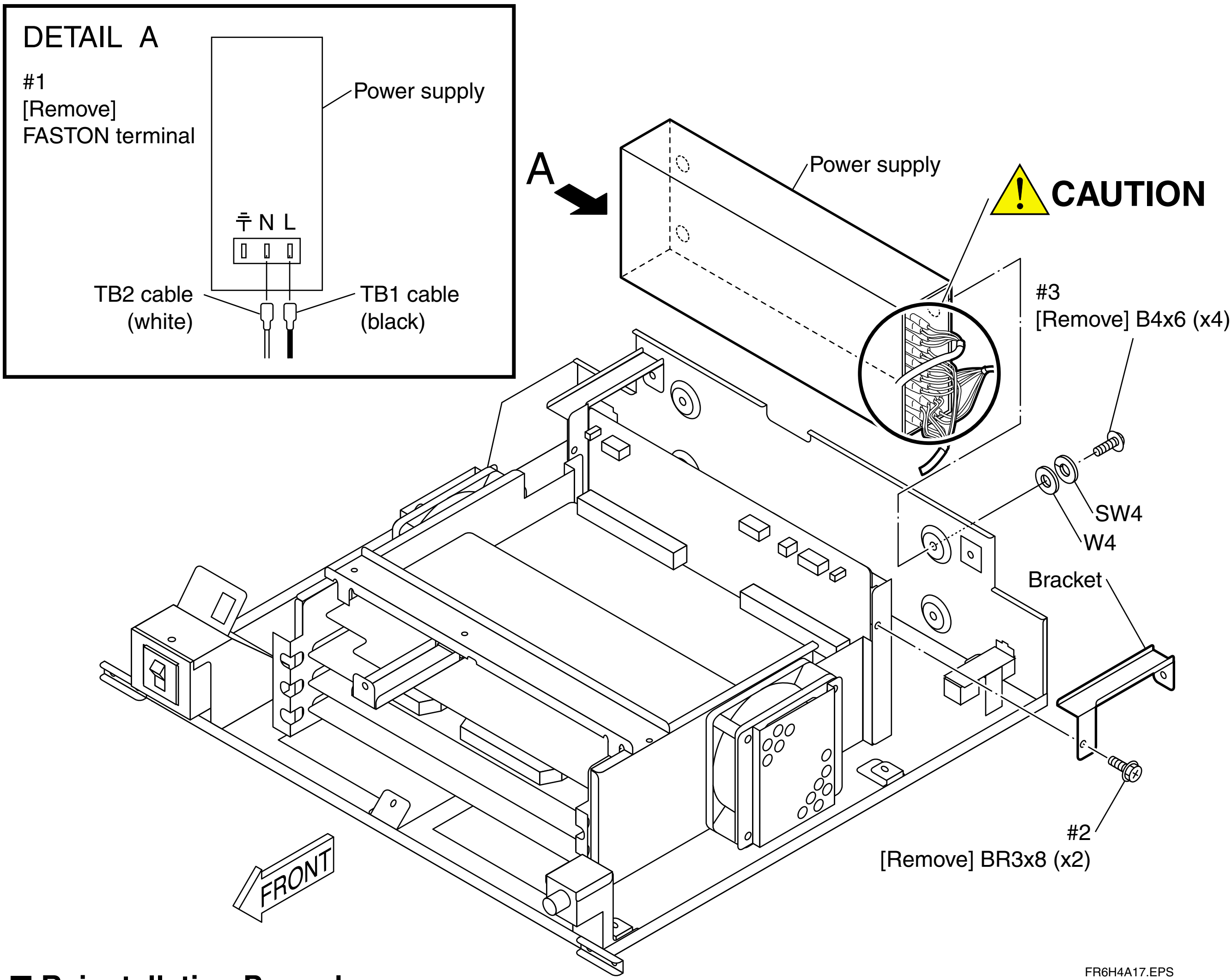
◆ NOTE ◆

To remove the FASTON terminal, push the shaded portion of the terminal illustrated below to detach it.



FR6H0001.EPS

(3) Remove the power supply.


DETAIL A
#1
[Remove]
FASTON terminal
Power supply
N L
TB2 cable
(white)
TB1 cable
(black)
A
Power supply
CAUTION
#3
[Remove] B4x6 (x4)
SW4
W4
Bracket
#2
[Remove] BR3x8 (x2)
FRONT

FR6H4A17.EPS

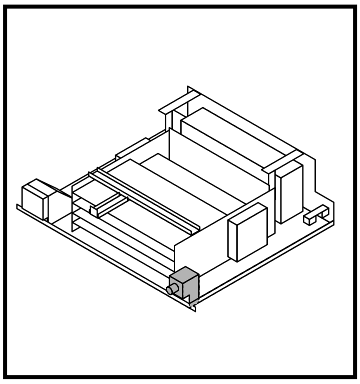
■ Reinstallation Procedures

◆ INSTRUCTION ◆

Connect the FASTON terminal to its correct location.

For reinstallation, reverse the removal steps.

11.9 Reset Switch



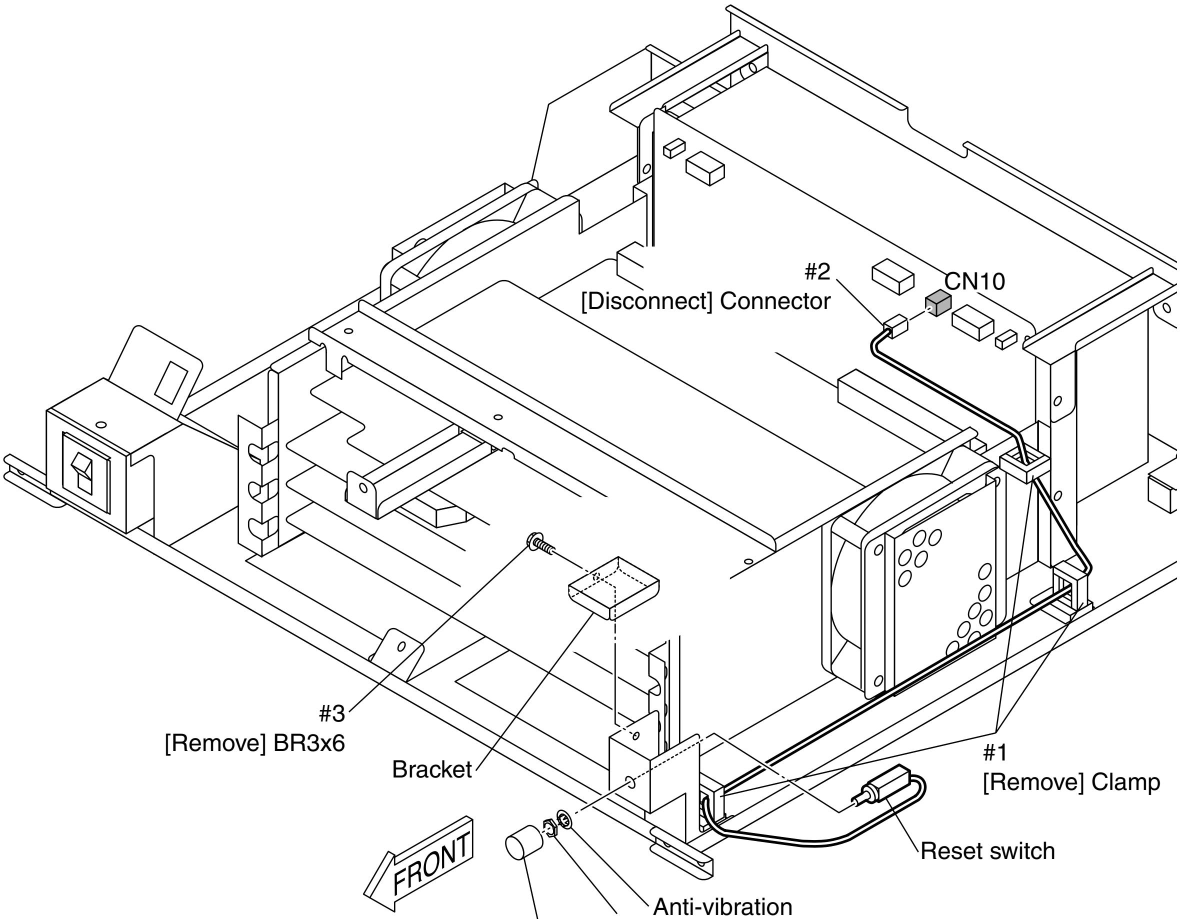
FR6H4A59.EPS

■ Removal Procedures

(1) Remove the controller.

☞ “11.1 Controller”

(2) Remove the reset switch.

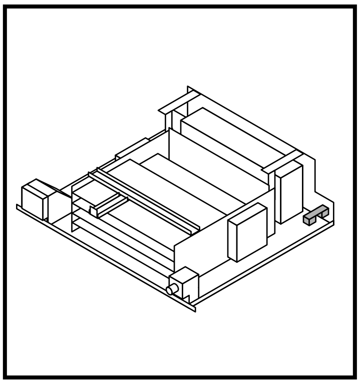

#2
[Disconnect] Connector
CN10
#3
[Remove] BR3x6
Bracket
FRONT
#1
[Remove] Clamp
Reset switch
Anti-vibration
#5
[Remove] Nut
#4
[Remove] Switch cover

FR6H4A18.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

11.10 CNN12A Board



FR6H4A60.EPS

CAUTION

When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.

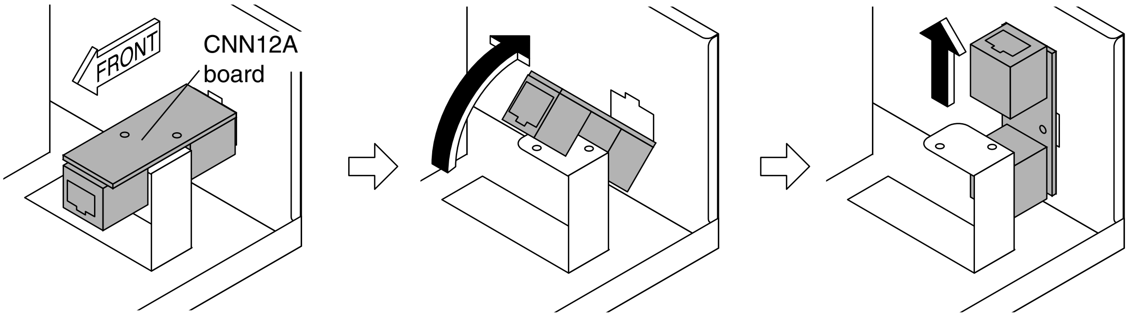
■ Removal Procedures

(1) Remove the controller.

☞ "11.1 Controller"

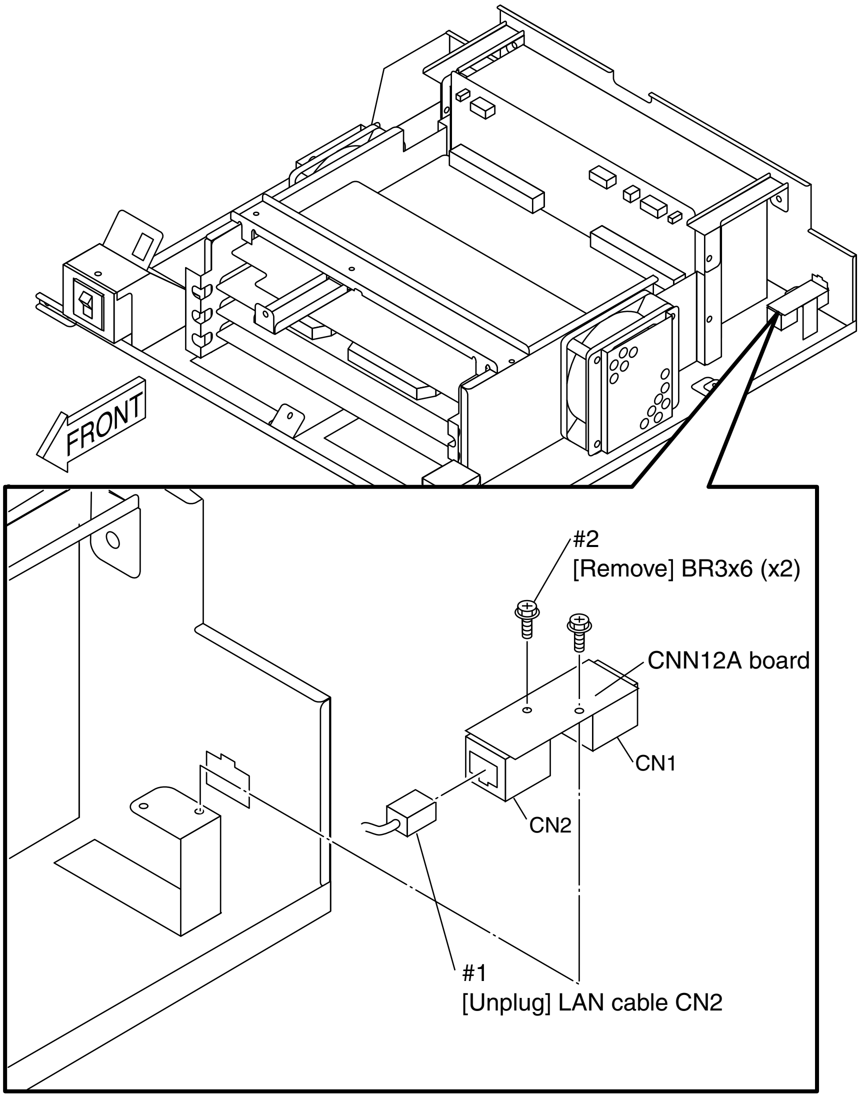
◆ ***NOTE*** ◆

To remove the CNN12A board, take the following steps in the illustration below.



FR6H4A19.EPS

(2) Remove the CNN12A board.

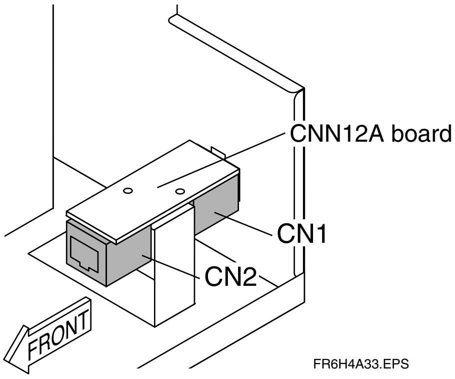

FRONT
#2
[Remove] BR3x6 (x2)
CNN12A board
CN1
CN2
#1
[Unplug] LAN cable CN2

FR6H4A20.EPS

■ Reinstallation Procedures

◆ ***INSTRUCTION*** ◆

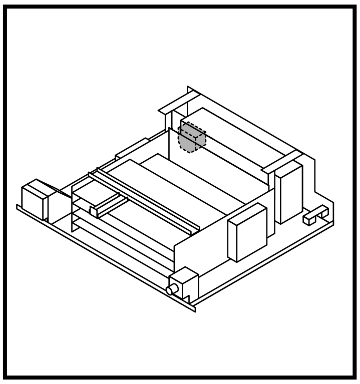
The CNN12A board should be installed in the orientation as illustrated below.


CNN12A board
CN1
CN2
FRONT

FR6H4A33.EPS

For reinstallation, reverse the removal steps.

11.11 Power Supply Socket



FR6H4A61.EPS

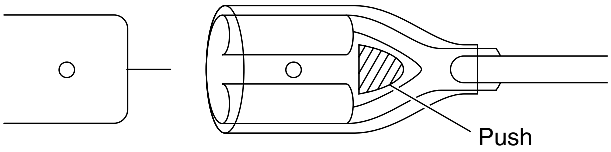
■ Removal Procedures

(1) Remove the controller.

☞ “11.1 Controller”

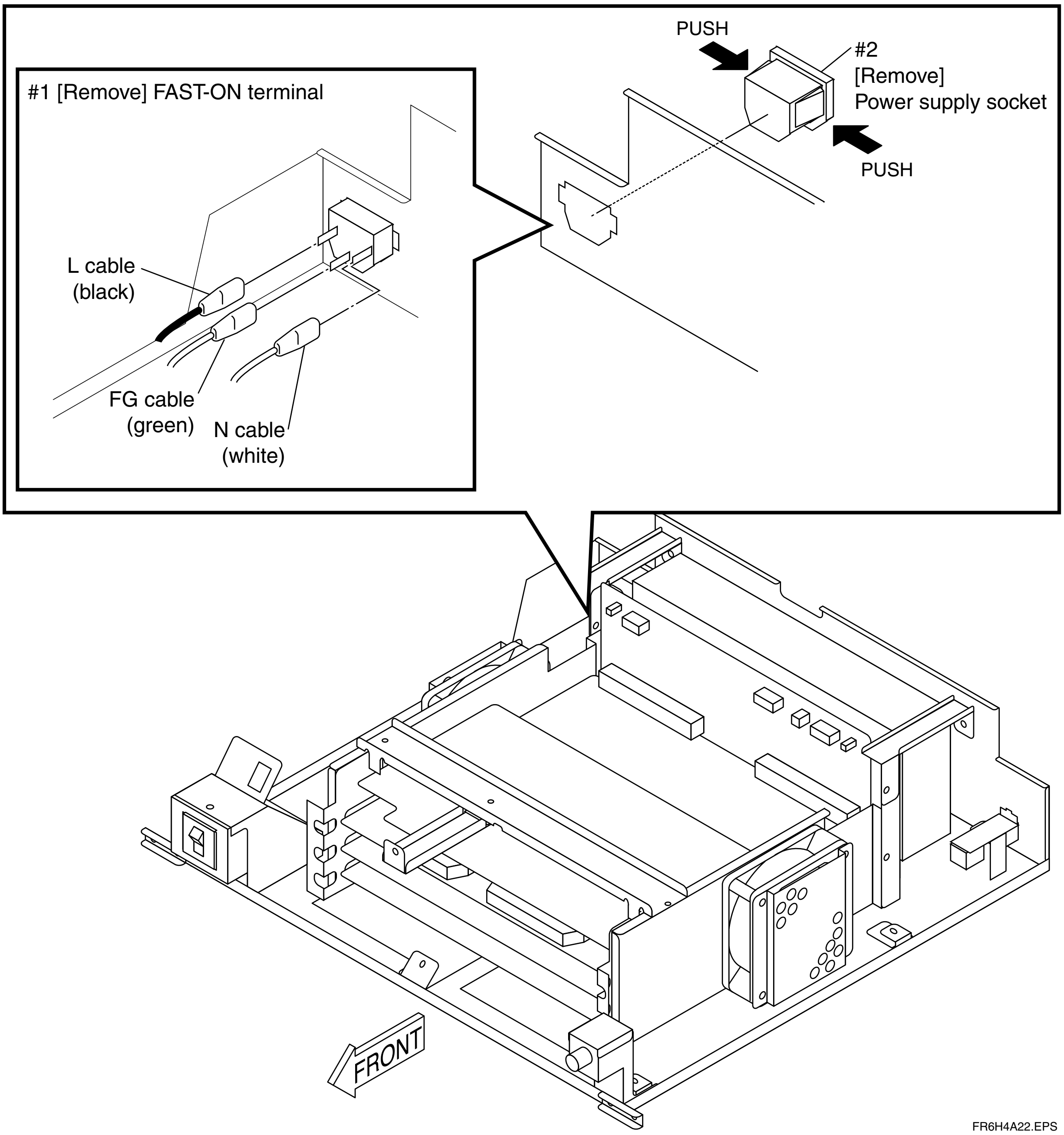
◆ ***NOTE*** ◆

To remove the FASTON terminal, push the shaded portion of the terminal illustrated below to detach it.



FR6H0001.EPS

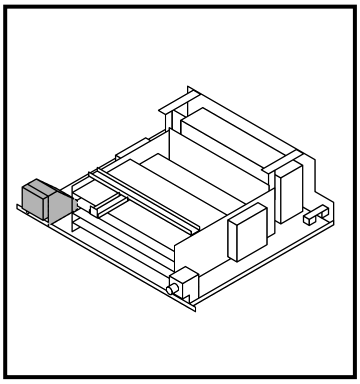
(2) Remove the power supply socket.


PUSH
#2
[Remove]
Power supply socket
PUSH
#1 [Remove] FAST-ON terminal
L cable
(black)
FG cable
(green)
N cable
(white)
FRONT
FR6H4A22.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

11.12 Breaker



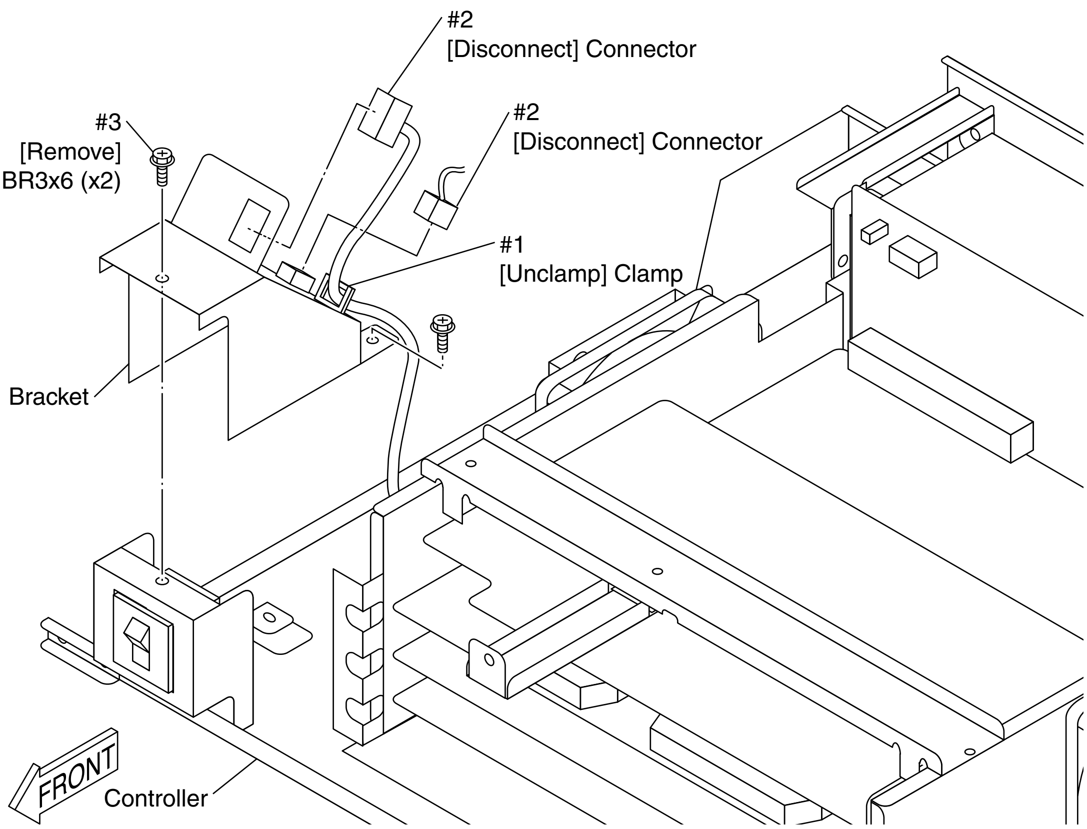
FR6H4A62.EPS

■ Removal Procedures

(1) Remove the controller.

☞ "11.1 Controller

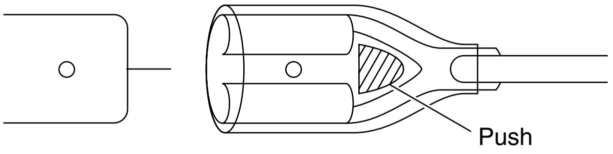
(2) Remove the bracket.


#2
[Disconnect] Connector
#2
[Disconnect] Connector
#3
[Remove]
BR3x6 (x2)
#1
[Unclamp] Clamp
Bracket
FRONT
Controller

FR6H4A23.EPS

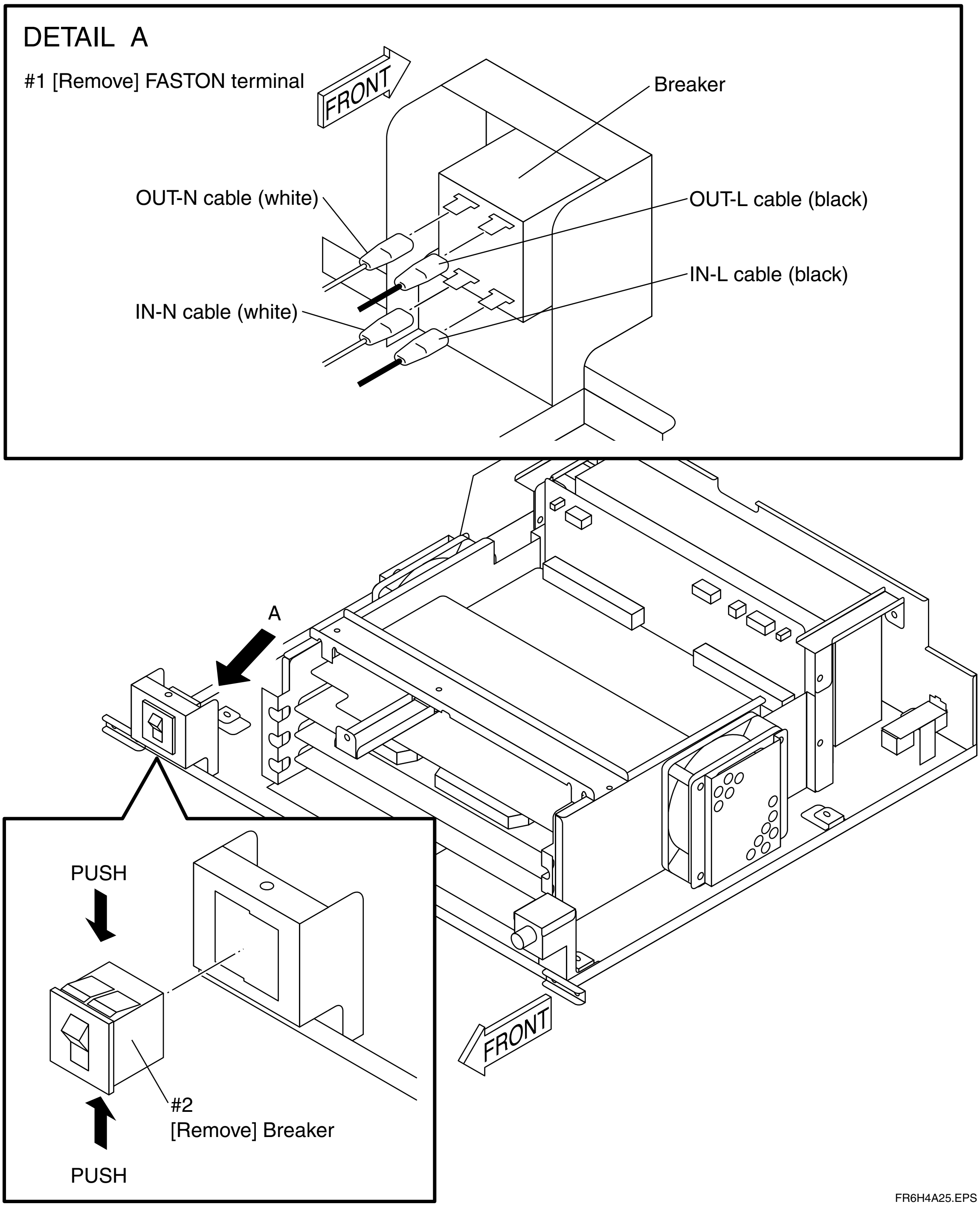
◆ NOTE ◆

To remove the FASTON terminal, push the shaded portion of the terminal illustrated below to detach it.



FR6H0001.EPS

(3) Remove the breaker.

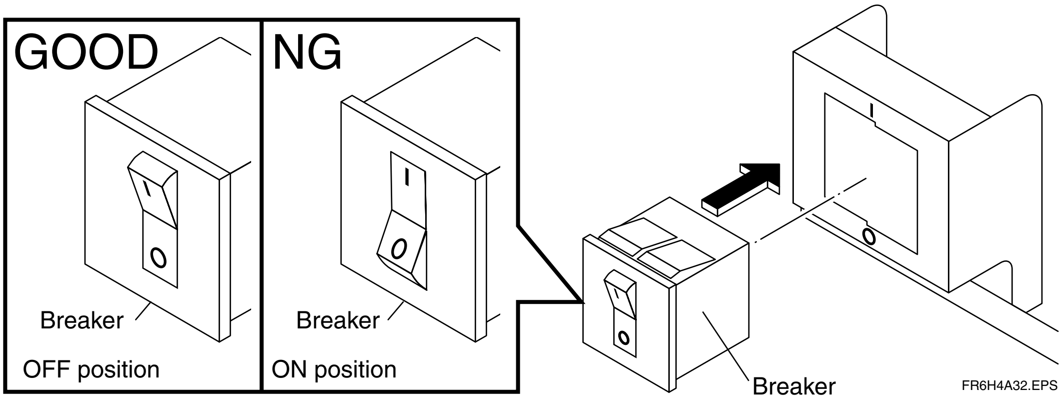

DETAIL A
#1 [Remove] FASTON terminal
FRONT
Breaker
OUT-N cable (white)
OUT-L cable (black)
IN-L cable (black)
IN-N cable (white)
A
PUSH
#2
[Remove] Breaker
PUSH
FRONT

FR6H4A25.EPS

■ Reinstallation Procedures

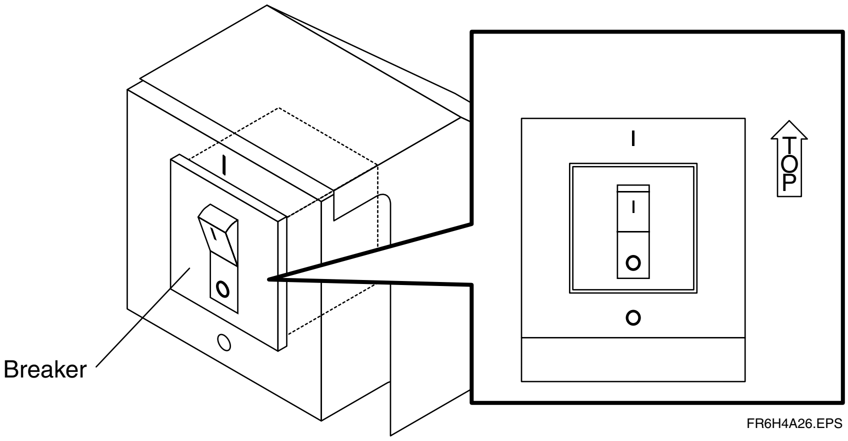
WARNING

Before installing the breaker, put the breaker switch in the OFF position.


GOOD
NG
Breaker
OFF position
Breaker
ON position
Breaker
I
O
FR6H4A32.EPS

CAUTION

The breaker should be mounted in its correct orientation.


I
O
Breaker
TOP
FR6H4A26.EPS

For reinstallation, reverse the removal steps.

■ Check/Adjustment Procedures

- Make sure that the breaker is installed in its OFF position.
- Make sure that the breaker is mounted in its correct orientation.

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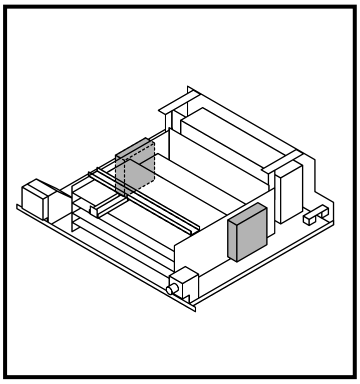
11.13 Fans (FAN1 and FAN2)



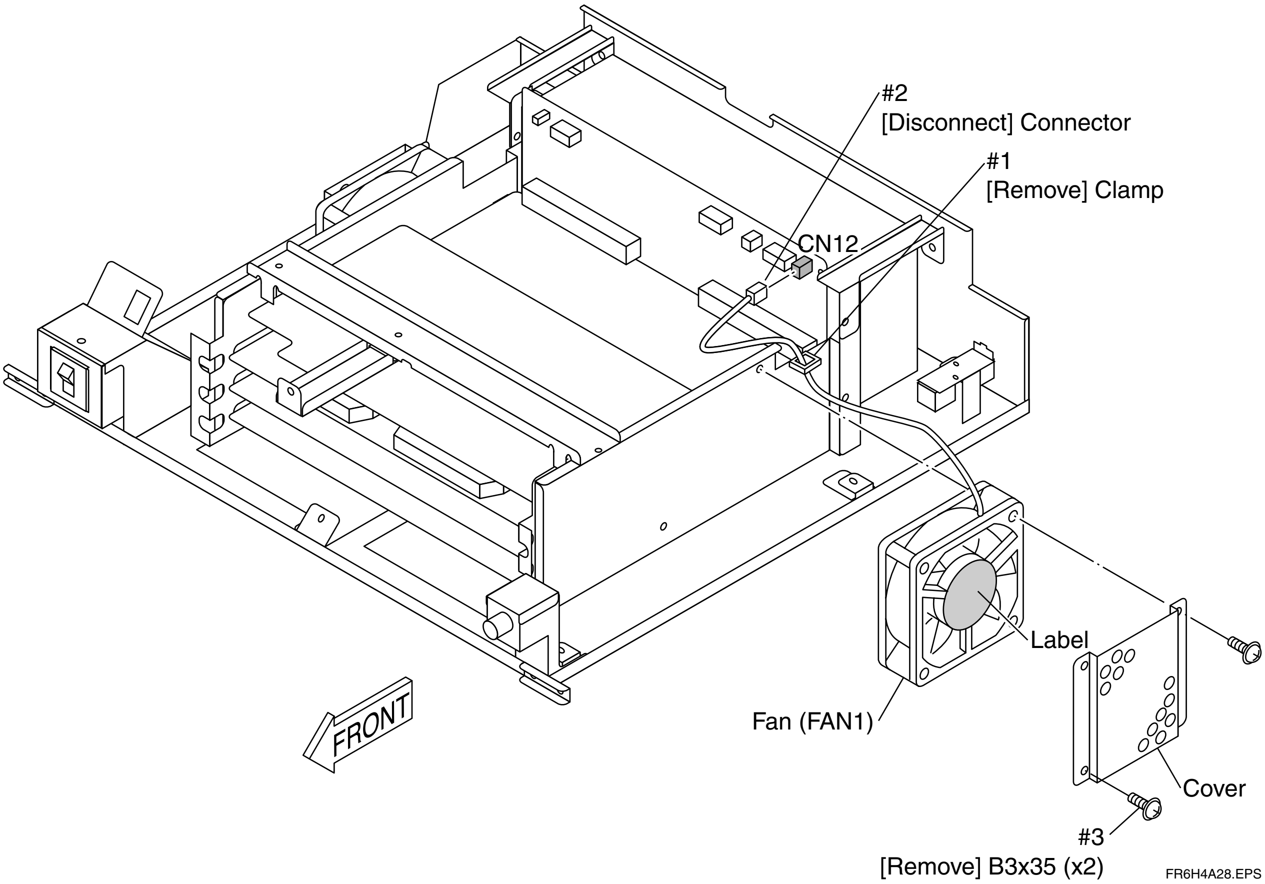
FR6H4A63.EPS

■ Removal Procedures

(1) Remove the controller.

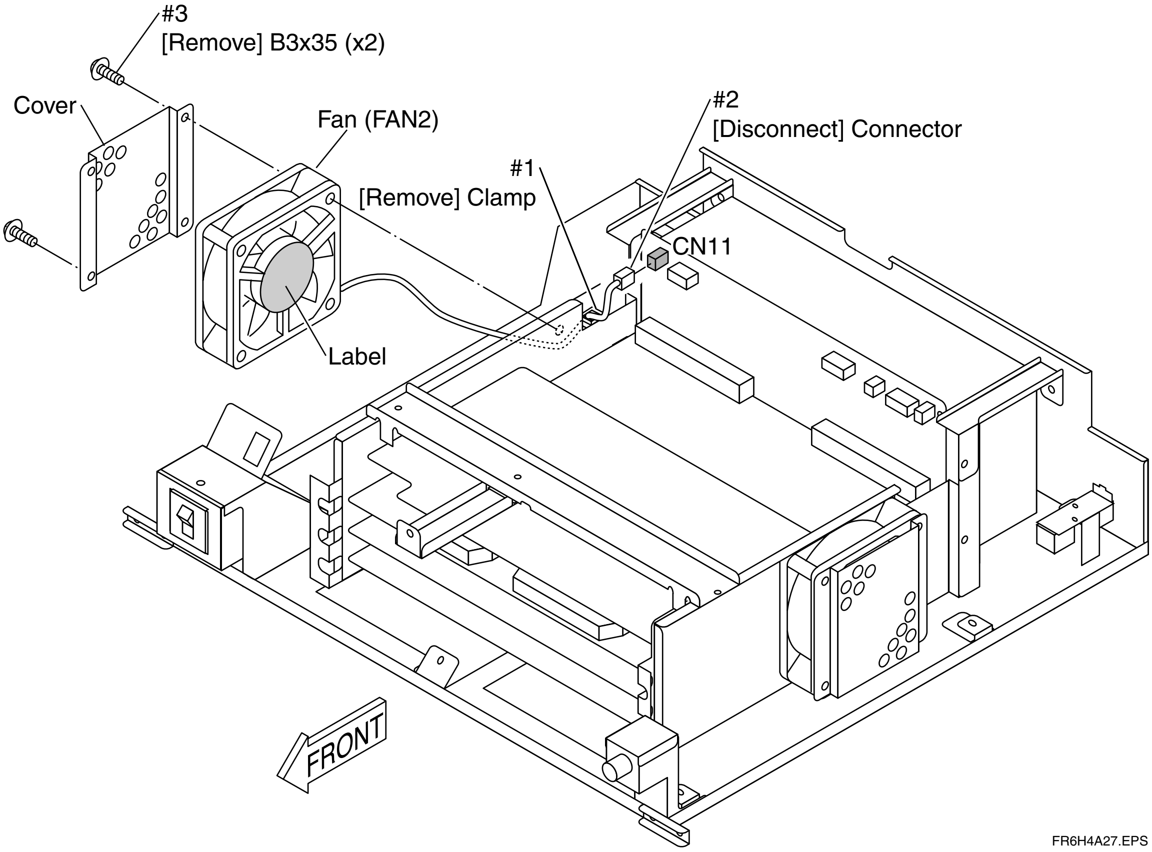
☞ "11.1 Controller"

(2) Remove the fan (FAN1).


#2
[Disconnect] Connector
#1
[Remove] Clamp
CN12
FRONT
Label
Fan (FAN1)
Cover
#3
[Remove] B3x35 (x2)

FR6H4A28.EPS

(3) Remove the fan (FAN2).


#3
[Remove] B3x35 (x2)
Cover
Fan (FAN2)
#2
[Disconnect] Connector
#1
[Remove] Clamp
CN11
Label
FRONT
FR6H4A27.EPS

■ Reinstallation Procedures

◆ *INSTRUCTION* ◆

When installing the fan, orient its label as shown in the illustration.

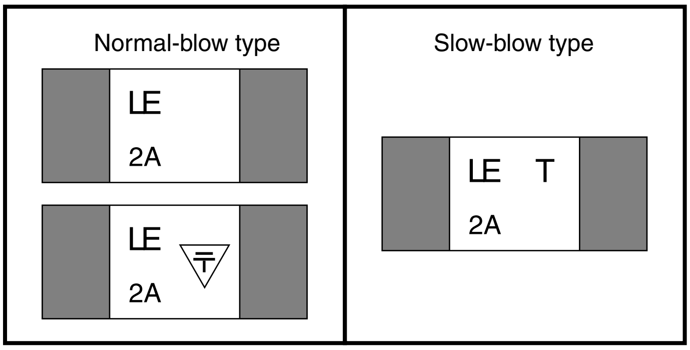
For installation, reverse the removal steps.

12. Replacing the Fuses and Fuse Locations

◆ INSTRUCTION ◆

There are two fuse types: normal-blow type and slow-blow type
The slow-blow type fuse has a mark "T" silk-screened on it.
When replacing the fuse, check its type.

- Example of silk-screened marks

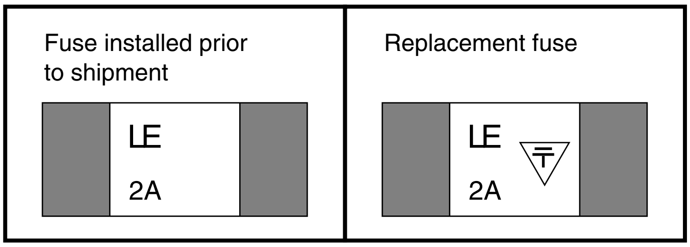

Normal-blow type
LE
2A
LE
T
2A
Slow-blow type
LE
T
2A

FR6H4C13.EPS

◇ REFERENCE ◇

The fuse (1A-5A) installed prior to shipment and a new replacement fuse (1A-5A) may have different silk-screened marks.

- Example of silk-screened marks


Fuse installed prior to shipment
LE
2A
Replacement fuse
LE
T
2A

FR6H4C14.EPS

■ List of Fuses

Board	Code No.	Type	Rating (A)	Fuse number ✻
MTH12A	137S2097	Slow blow (T)	5	A11, A21, A31, A41, H11, J11
	137S2096	Slow blow (T)	4	B11, B21, C11
	137S2094	Slow blow (T)	3	C21, C31
	137S2092	Slow blow (T)	2	K11
SCN12A	137S2084	Slow blow (T)	1.5	A22, H12, H13, H14, J12
SNS12A	137S2084	Slow blow (T)	1.5	A32, A33
	137S2083	Slow blow (T)	1	A34
	137S1219	Normal blow	500 m	A35
DRV12A	137S2094	Slow blow (T)	3	D11, D21, D41, D51, E11, E21, E31, E51, L31
	137S2092	Slow blow (T)	2	L11
	137S1220	Normal blow	2	D31, E41, L21

✻ Fuse number: Number indicated in the fuse block diagram.

Tbl_MC213_LB.EPS

■ Fuse Replacement Procedures

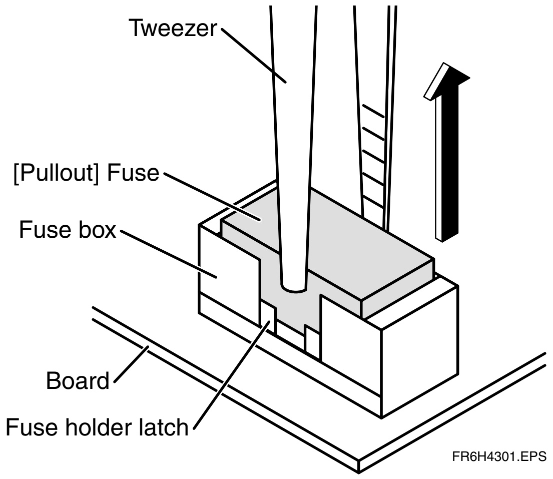
CAUTIONS

- *When servicing any printed circuit board, be sure to wear an anti-static wristband to ground your body. If your body is not grounded, static electricity built on your body may cause damage to electronic parts on the board.*
- *When replacing the fuse, check the type and rating (A) of the fuse to be replaced, and replace it with a fuse of the same type.*
  At the same time, check the rating (A) silk-screened on the board as well.
- *To replace the fuse, use tweezers and exercise care not to damage the rib of the fuse holder.*

(1) Remove the board.

☞ "11. Removing and Reinstalling the Controller"

(2) Pull out the fuse and replace it with a new one.



12.1 MTH12A Board Fuses

■ Removal Procedures

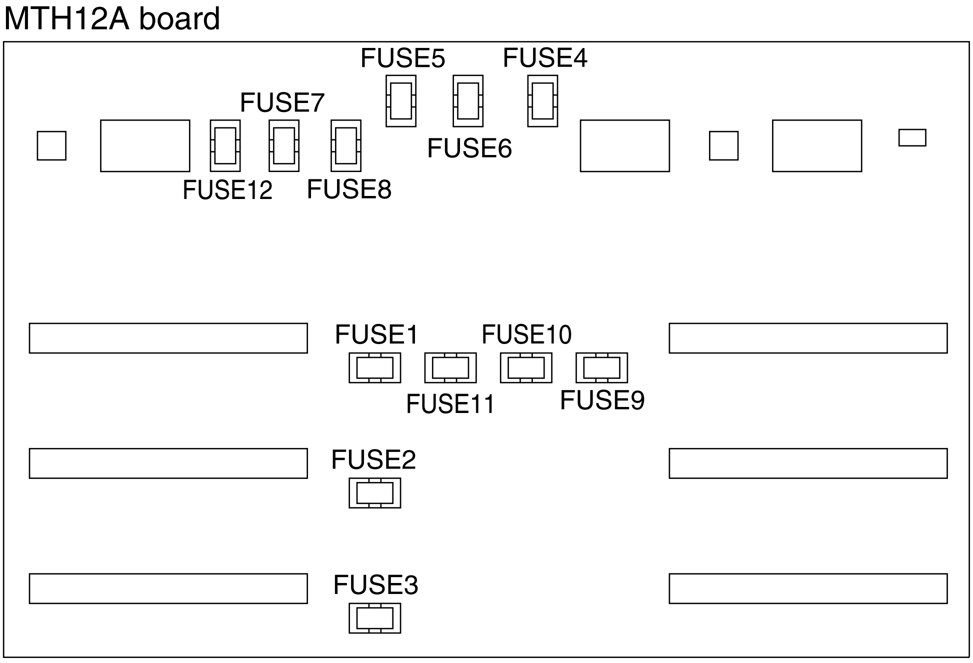
(1) Remove the MTH12A board.

☞ “11.7 MTH12A Board”

(2) Replace the fuse.

☞ “■ Fuse Replacement Procedures”

■ Fuse Locations


MTH12A board
FUSE5
FUSE4
FUSE7
FUSE6
FUSE12
FUSE8
FUSE1
FUSE10
FUSE11
FUSE9
FUSE2
FUSE3

FR6H4C03.EPS

■ Fuse Information

Board indications	Type	Rating (A)	Fuse number ✻
FUSE1	Slow blow (T)	5	A31
FUSE2	Slow blow (T)	5	A21
FUSE3	Slow blow (T)	5	A11
FUSE4	Slow blow (T)	5	A41
FUSE5	Slow blow (T)	4	B11
FUSE6	Slow blow (T)	4	B21
FUSE7	Slow blow (T)	4	C11
FUSE8	Slow blow (T)	3	C21
FUSE9	Slow blow (T)	5	H11
FUSE10	Slow blow (T)	5	J11
FUSE11	Slow blow (T)	2	K11
FUSE12	Slow blow (T)	3	C31

✻ Fuse number: Number indicated in the fuse block diagram.

Tbl_MC214_LB.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

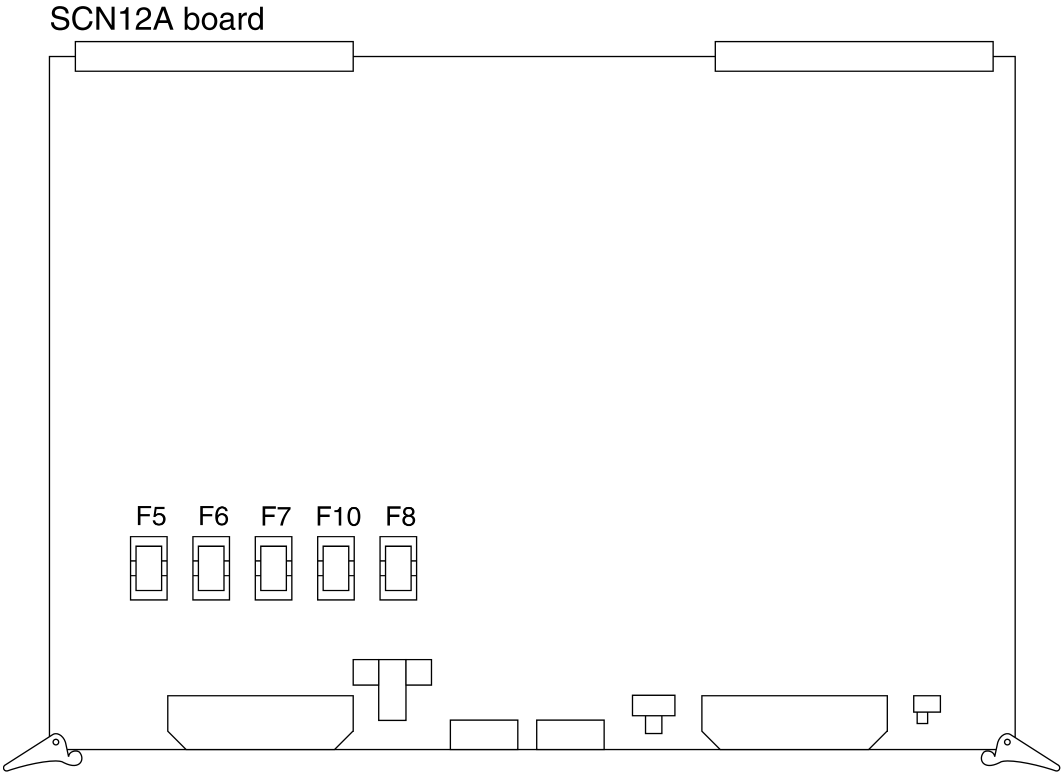
12.2 SCN12A Board Fuses

■ Removal Procedures

(1) Remove the SCN12A board.
☞ “11.3 SCN12A Board”

(2) Replace the fuse.
☞ “■ Fuse Replacement Procedures”

■ Fuse Locations



FR6H4C02.EPS

■ Fuse Information

Board indications	Type	Rating (A)	Fuse number ✻
F5	Slow blow (T)	1.5	A22
F6	Slow blow (T)	1.5	H14
F7	Slow blow (T)	1.5	H12
F8	Slow blow (T)	1.5	H13
F10	Slow blow (T)	1.5	J12

✻ Fuse number: Number indicated in the fuse block diagram.

Tbl_MC215_LB.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

12.3 SNS12A Board Fuses

■ Removal Procedures

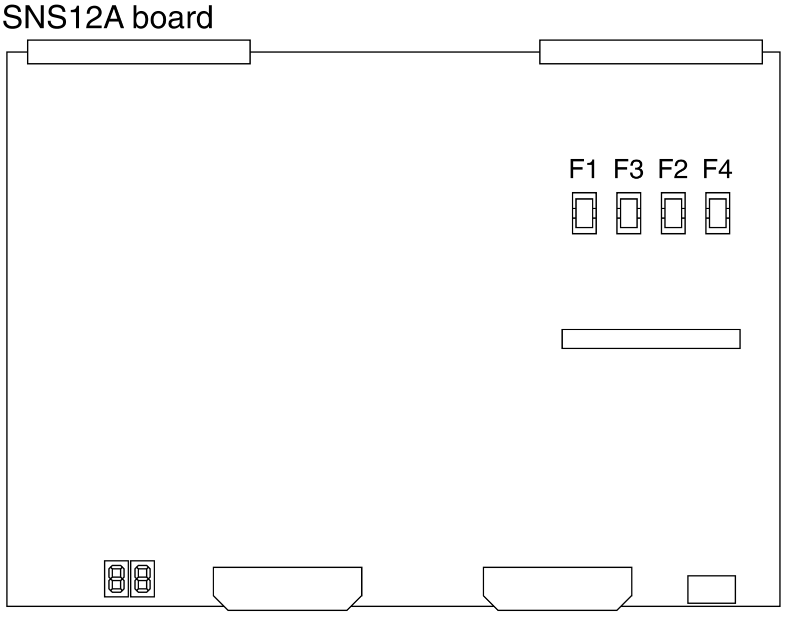
(1) Remove the SNS12A board.

☞ "11.5 SNS12A Board"

(2) Replace the fuse.

☞ "■ Fuse Replacement Procedures"

■ Fuse Locations



FR6H4C04.EPS

■ Fuse Information

Board indications	Type	Rating (A)	Fuse number ✻
F1	Normal blow	500 m	A35
F2	Slow blow (T)	1.5	A34
F3	Slow blow (T)	1	A33
F4	Slow blow (T)	1.5	A32

✻ Fuse number: Number indicated in the fuse block diagram.

Tbl_MC216_LB.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

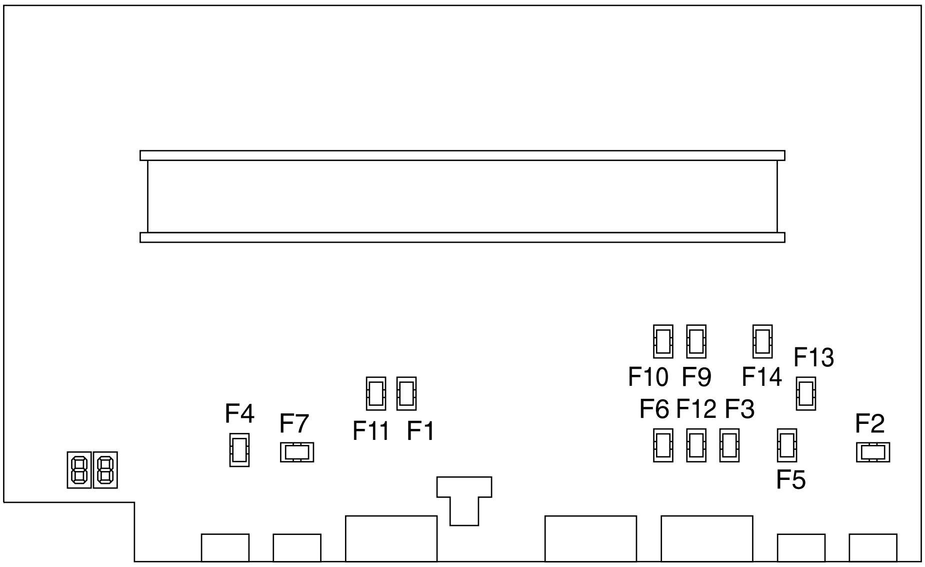
12.4 DRV12A Board Fuses

■ Removal Procedures

(1) Remove the DRV12A board.
☞ “11.6 DRV12A Board”
(2) Replace the fuse.
☞ “■ Fuse Replacement Procedures”

■ Fuse Locations

DRV12A board



FR6H4C05.EPS

■ Fuse Information

Board indications	Type	Rating (A)	Fuse number ✻
F1	Slow blow (T)	3	D11
F2	Slow blow (T)	3	E21
F3	Slow blow (T)	3	E11
F4	Slow blow (T)	3	D41
F5	Slow blow (T)	3	E31
F6	Slow blow (T)	3	D21
F7	Slow blow (T)	2	L11
F9	Normal blow	2	E41
F10	Normal blow	2	D31
F11	Slow blow (T)	3	D51
F12	Slow blow (T)	3	E51
F13	Normal blow	2	L21
F14	Slow blow (T)	3	L31

✻ Fuse number: Number indicated in the fuse block diagram.

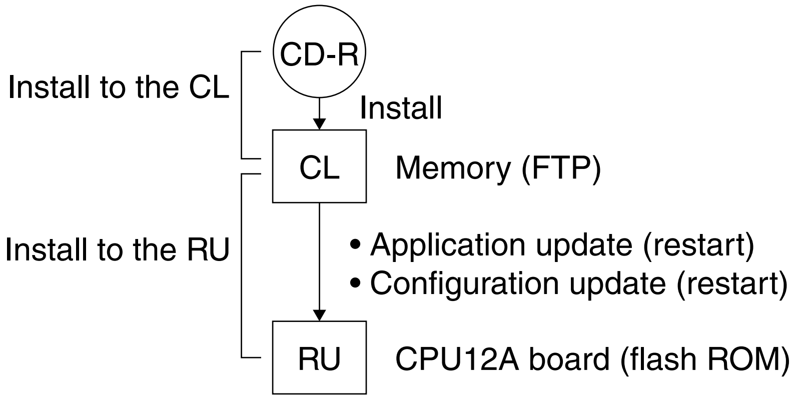
Tbl_MC217_LB.EPS

■ Reinstallation Procedures

For reinstallation, reverse the removal steps.

13. Version Updating Procedures

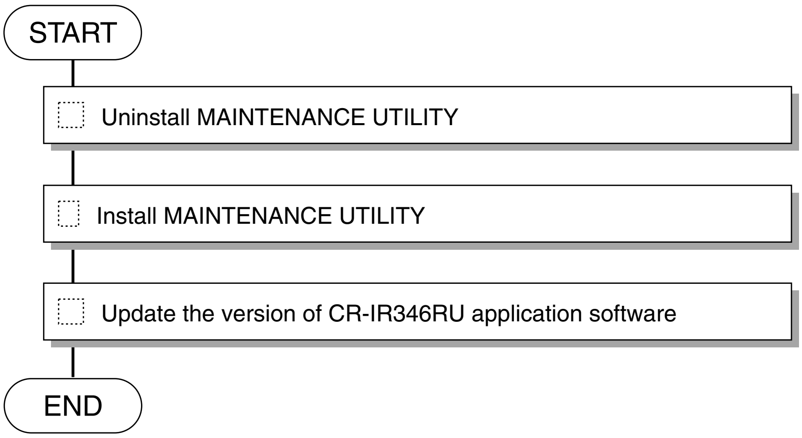
A version update for the CL/RU is executed in the following flow.


Install to the CL
Install to the RU
CD-R
Install
CL
Memory (FTP)
• Application update (restart)
• Configuration update (restart)
RU
CPU12A board (flash ROM)

FR6H4D01.EPS

■ Version Update Flow

When the version of the CR-IR346RU software is to be updated, the following flow should be observed.


START
☐ Uninstall MAINTENANCE UTILITY
☐ Install MAINTENANCE UTILITY
☐ Update the version of CR-IR346RU application software
END

☞ "13.1 Procedures for Updating the Version of the MAINTENANCE UTILITY Software, ■ Uninstall Procedures"

☞ "13.1 Procedures for Updating the Version of the MAINTENANCE UTILITY Software, ■ Install Procedures"

☞ "13.2 Procedures for Updating the Version of the RU Application Software"

FR6H4977.EPS

■ Combination of CR-IR346RU Software Version and Scanning Optics Unit Version

When updating the version of the CR-IR346RU software, check the version combination table below and replace the scanning optics unit as well.

CR-IR346RU software version	Scanning optics unit version
–A02	–839Y0035A/B
A02–	839Y0035C

TR6H4904.EPS

13.1 Procedures for Updating the Version of the MAINTENANCE UTILITY Software

CAUTIONS

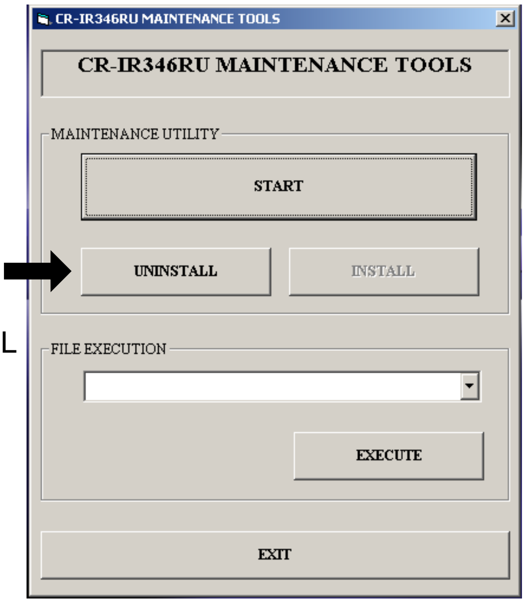
- *Do not power OFF the CL/RU during version update. If it is powered OFF during version update, the machine will not boot up.*
- *Before performing the install procedures, quit all the applications running on the CL.*

◇ REFERENCE ◇

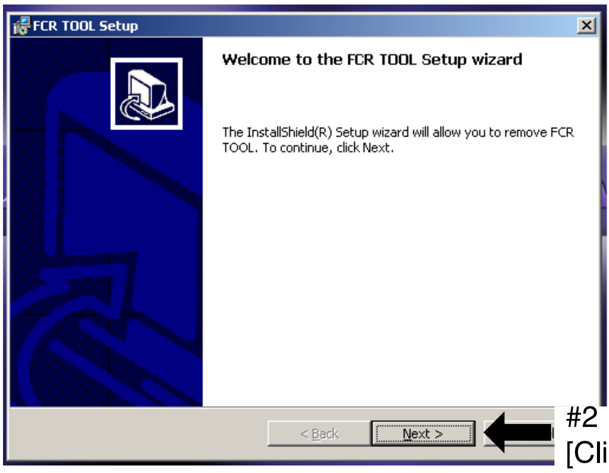
The version update of the MAINTENANCE UTILITY software can be implemented by uninstalling the current version of the software and then installing a newer version.
The current version can be uninstalled by use of a newer version of the Ver.up CD-R.

■ Uninstall Procedures

(1) Set the Ver.up CD-R in the CL and uninstall the software as instructed on the CL screen.


CR-IR346RU MAINTENANCE TOOLS
CR-IR346RU MAINTENANCE TOOLS
MAINTENANCE UTILITY
START
UNINSTALL
INSTALL
FILE EXECUTION
EXECUTE
EXIT

#1
[Click]
UNINSTALL

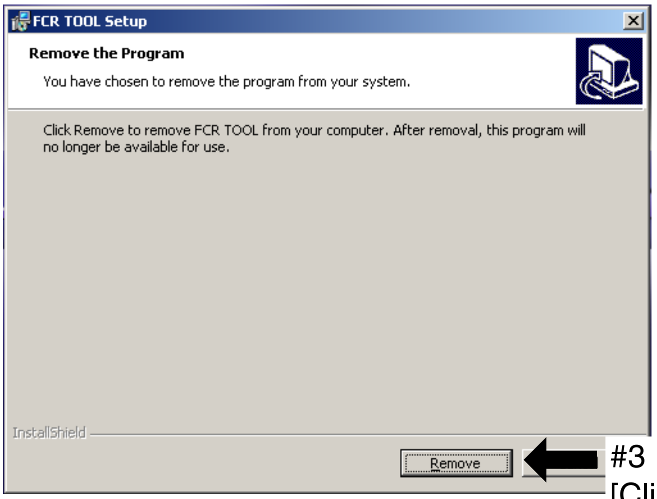

FCR TOOL Setup
< Back
Next >

Welcome to the FCR TOOL Setup wizard

The InstallShield(R) Setup wizard will allow you to remove FCR TOOL. To continue, click Next.

#2
[Click]
Next

FR6H4978.EPS

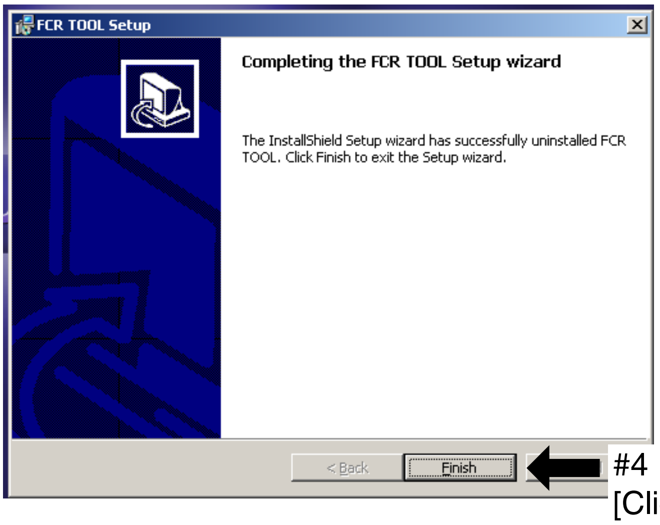

FCR TOOL Setup
InstallShield
Remove

Remove the Program

You have chosen to remove the program from your system.

Click Remove to remove FCR TOOL from your computer. After removal, this program will no longer be available for use.

#3
[Click]
Remove


FCR TOOL Setup
< Back
Finish

Completing the FCR TOOL Setup wizard

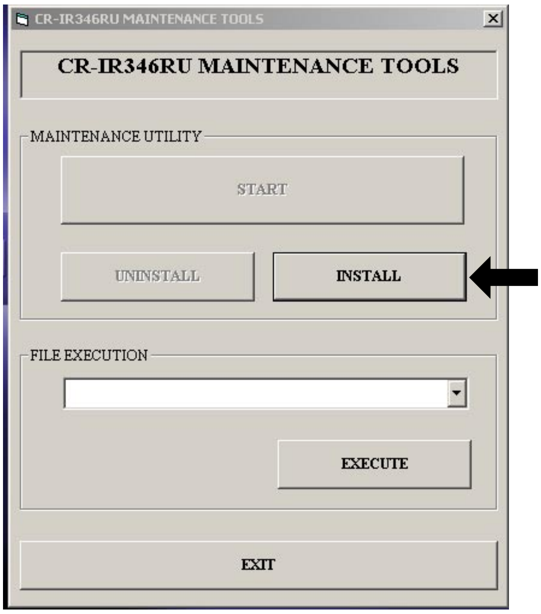
The InstallShield Setup wizard has successfully uninstalled FCR TOOL. Click Finish to exit the Setup wizard.

#4
[Click]
Finish

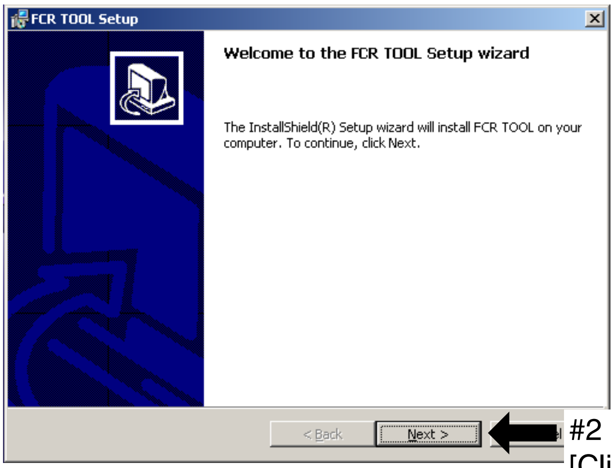
FR6H4979.EPS

■ Install Procedures

(1) Subsequent to the uninstall procedures, install the software as instructed on the CL screen.


CR-IR346RU MAINTENANCE TOOLS
CR-IR346RU MAINTENANCE TOOLS
MAINTENANCE UTILITY
START
UNINSTALL
INSTALL
FILE EXECUTION
EXECUTE
EXIT

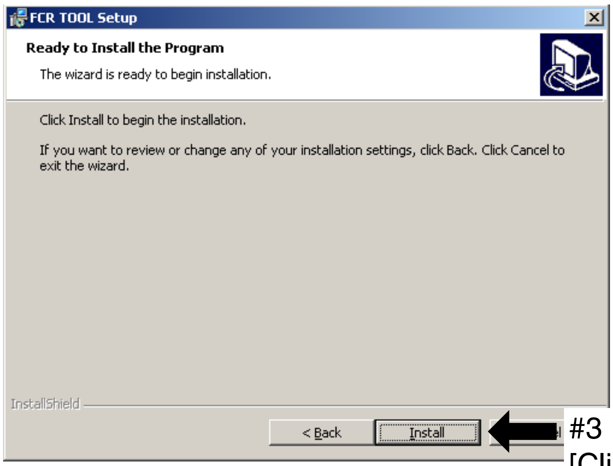
#1
[Click]
INSTALL


FCR TOOL Setup
< Back
Next >

Welcome to the FCR TOOL Setup wizard

The InstallShield(R) Setup wizard will install FCR TOOL on your computer. To continue, click Next.

#2
[Click]
Next


FCR TOOL Setup
InstallShield
< Back
Install

Ready to Install the Program

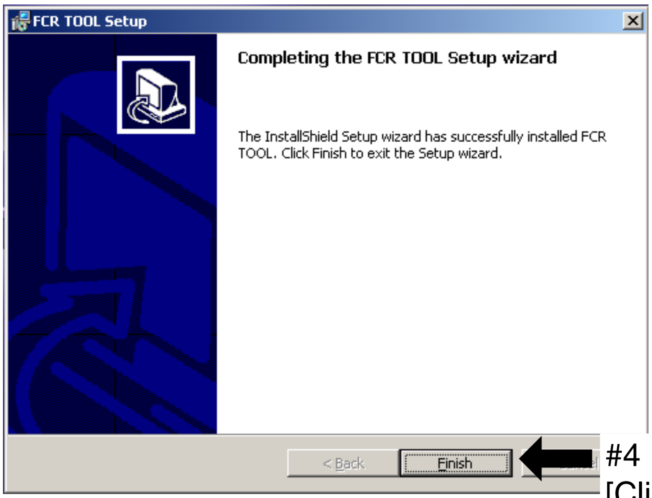
The wizard is ready to begin installation.

Click Install to begin the installation.

If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

#3
[Click]
Install

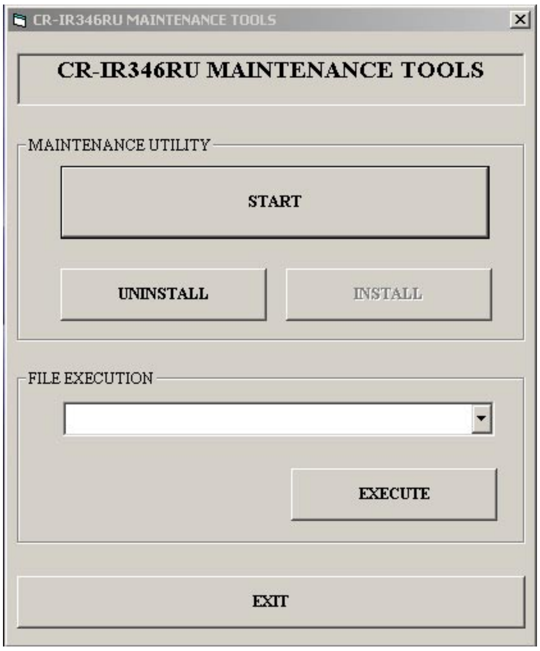
FR6H4980.EPS


FCR TOOL Setup
< Back
Finish

Completing the FCR TOOL Setup wizard

The InstallShield Setup wizard has successfully installed FCR TOOL. Click Finish to exit the Setup wizard.

#4
[Click]
Finish


CR-IR346RU MAINTENANCE TOOLS
CR-IR346RU MAINTENANCE TOOLS
MAINTENANCE UTILITY
START
UNINSTALL
INSTALL
FILE EXECUTION
EXECUTE
EXIT

#5
[Click]
EXIT

FR6H4981.EPS

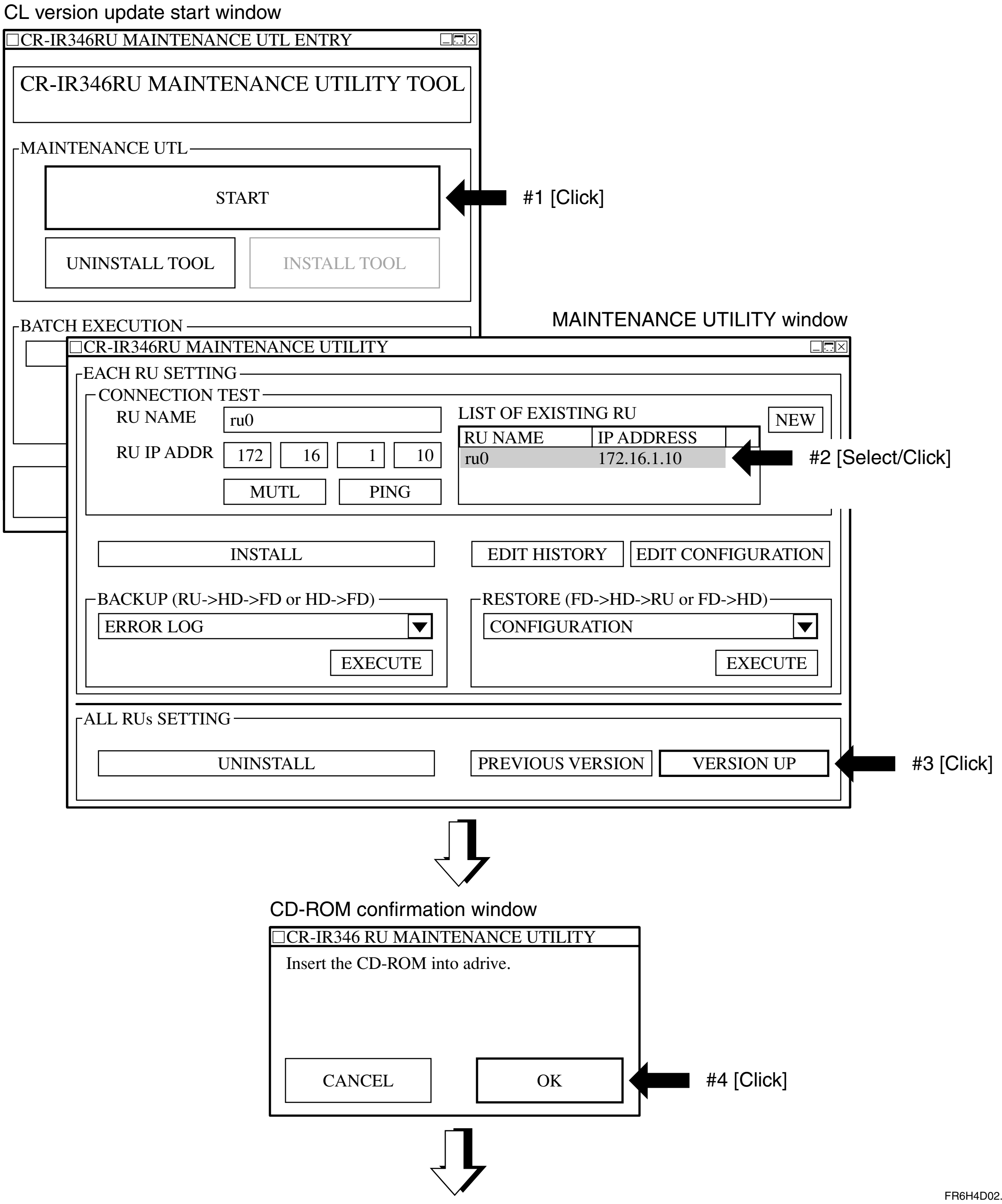
13.2 Procedures for Updating the Version of the RU Application Software

■ Install to the CL

CAUTIONS

- *Do not power OFF the CL/RU during version update. If it is powered OFF during version update, the machine will not boot up.*
- *Before performing the install procedures, quit all the applications running on the CL.*

(1) Set the Ver.up CD-R in the CL and observe the on-screen instructions of the CL to perform version update.


CL version update start window
☐CR-IR346RU MAINTENANCE UTL ENTRY
CR-IR346RU MAINTENANCE UTILITY TOOL
MAINTENANCE UTL
START
#1 [Click]
UNINSTALL TOOL
INSTALL TOOL
BATCH EXECUTION
MAINTENANCE UTILITY window
☐CR-IR346RU MAINTENANCE UTILITY
EACH RU SETTING
CONNECTION TEST
MUTL
PING
LIST OF EXISTING RU
NEW
#2 [Select/Click]
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
BACKUP (RU->HD->FD or HD->FD)
EXECUTE
RESTORE (FD->HD->RU or FD->HD)
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP
#3 [Click]
CD-ROM confirmation window
☐CR-IR346 RU MAINTENANCE UTILITY
CANCEL
OK
#4 [Click]

RU NAME: ru0

RU IP ADDR: 172 16 1 10

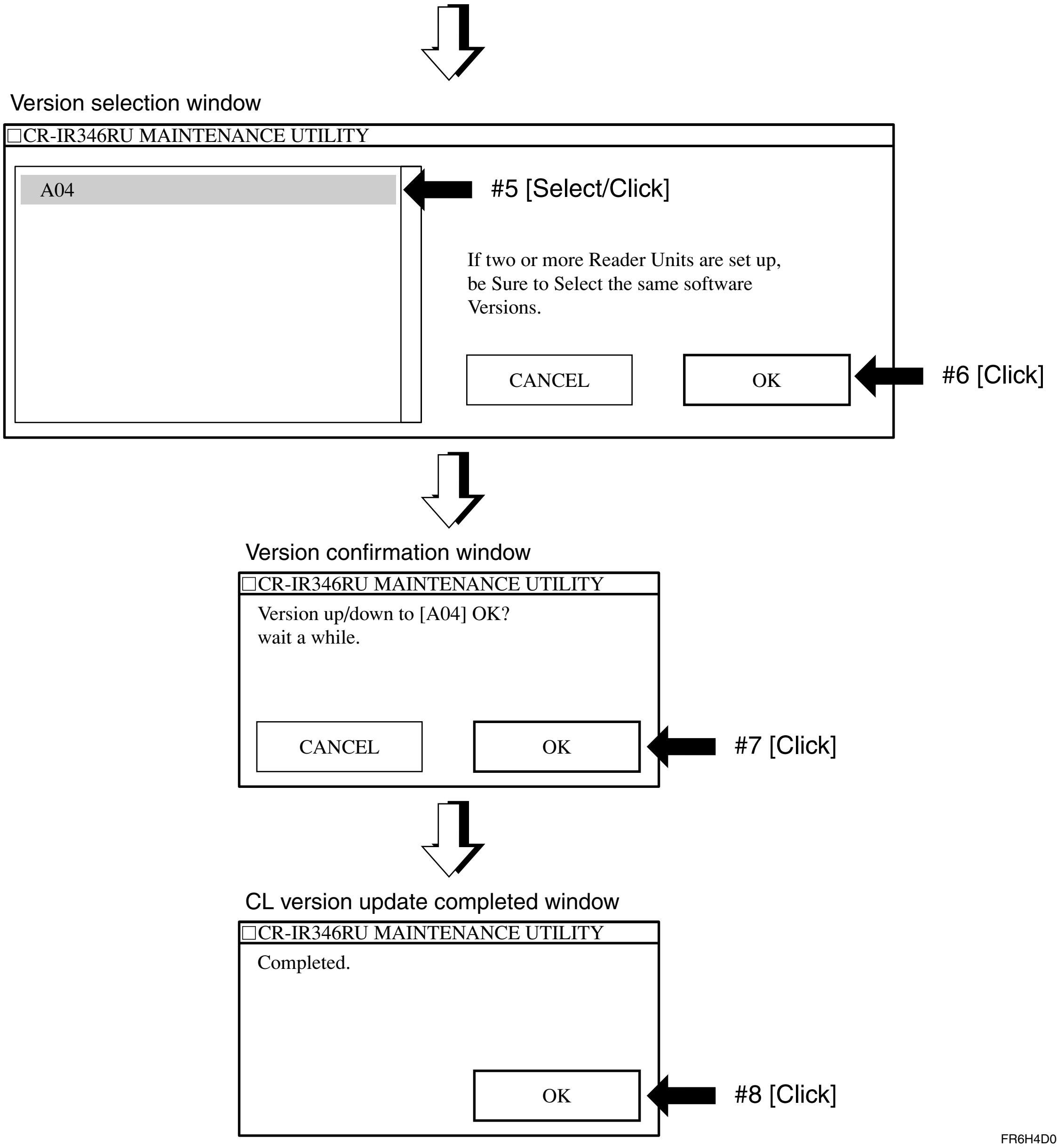
RU NAME	IP ADDRESS
ru0	172.16.1.10

BACKUP (RU->HD->FD or HD->FD): ERROR LOG

RESTORE (FD->HD->RU or FD->HD): CONFIGURATION

Insert the CD-ROM into adrive.

FR6H4D02.EPS



Version selection window

☐CR-IR346RU MAINTENANCE UTILITY

A04

#5 [Select/Click]

If two or more Reader Units are set up,
be Sure to Select the same software
Versions.

#6 [Click]

Version confirmation window

☐CR-IR346RU MAINTENANCE UTILITY

Version up/down to [A04] OK?
wait a while.

#7 [Click]

CL version update completed window

☐CR-IR346RU MAINTENANCE UTILITY

Completed.

#8 [Click]

FR6H4D03.EPS

(2) Take out the Ver.up CD-R.

■ Install to the RU

Installation to the RU consists of updating the reader unit application software and updating the configuration.

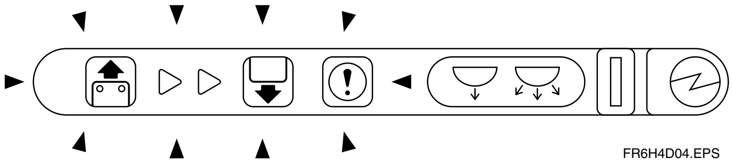
CAUTION

Do not power OFF the CL/RU during version update.
If it is powered OFF during version update, the machine will not boot up.

(1) Power OFF the RU and then back ON.

◇ REFERENCE ◇

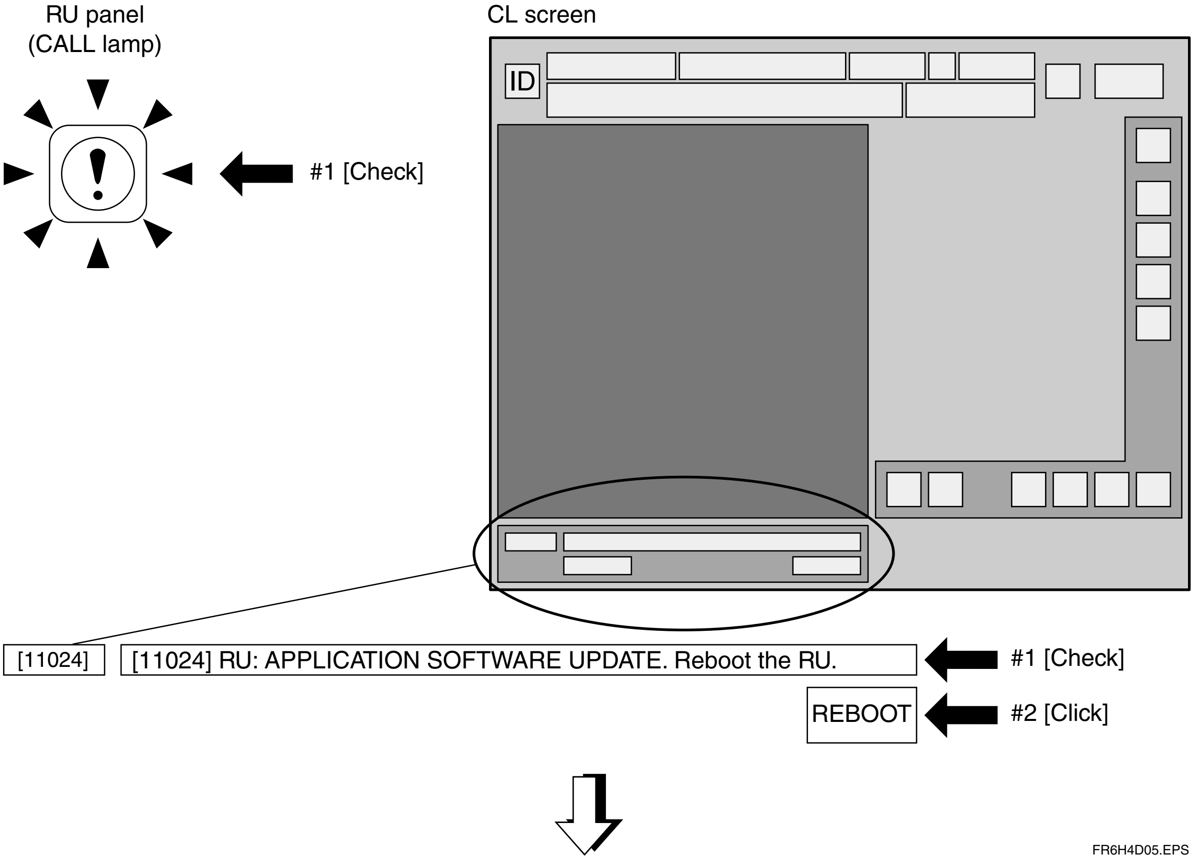
When the RU is powered OFF and then back ON, the installation from the CL starts.
At this time, all the indicators on the panel of the RU are illuminated, and an audible alarm is generated.



FR6H4D04.EPS

(2) Verify that the RU call lamp is illuminated, with [11024] displayed on the CL screen, and restart the RU from the CL screen.

When it is restarted, the RU is power OFF and then back ON with all indicators on the panel illuminated, and an audible alarm (three short beeps) is generated.

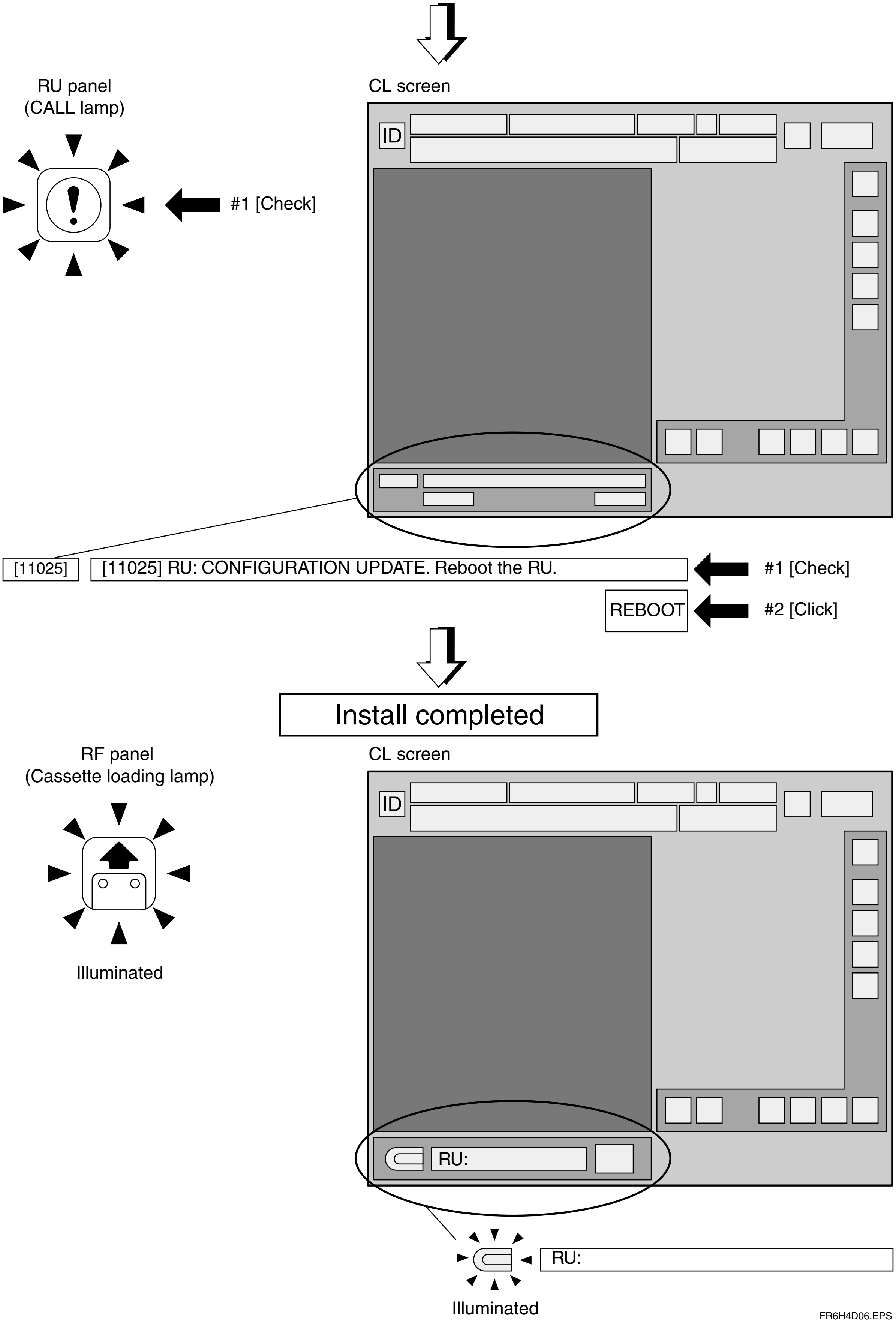


[11024] [11024] RU: APPLICATION SOFTWARE UPDATE. Reboot the RU.

FR6H4D05.EPS

(3) Verify that the RU call lamp is illuminated, with [11025] displayed on the CL screen, and restart the RU from the CL screen.

When it is restarted, all the indicators on the panel are illuminated, and an audible alarm is generated.



[11025] RU: CONFIGURATION UPDATE. Reboot the RU.

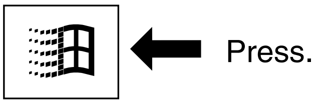
RU panel
(CALL lamp)
#1 [Check]
CL screen
ID
[11025]
#1 [Check]
REBOOT
#2 [Click]
Install completed
RF panel
(Cassette loading lamp)
Illuminated
CL screen
ID
RU:
RU:
Illuminated

FR6H4D06.EPS

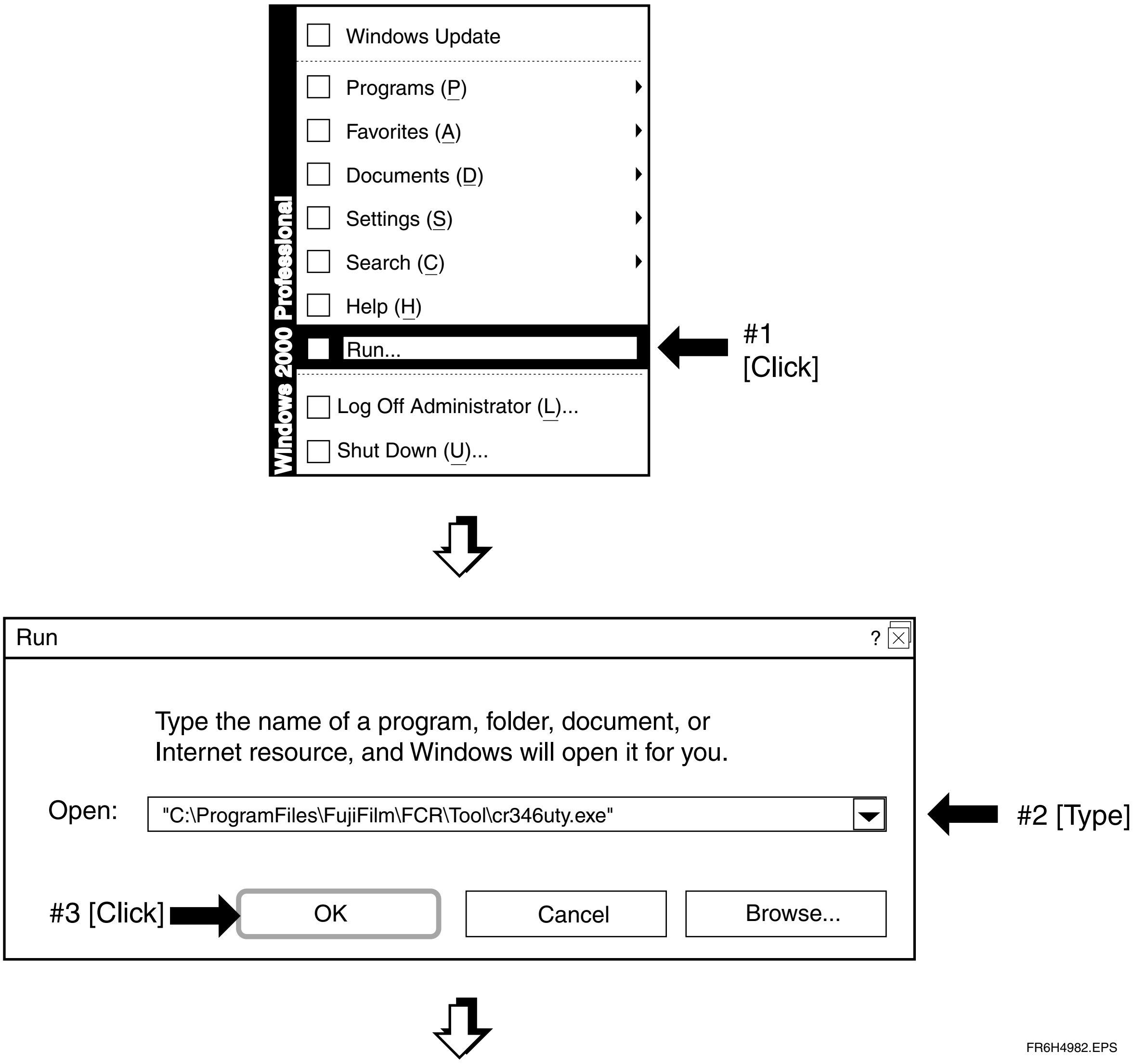
■ Procedures for Confirming Version Update

After completing the installation to the RU, confirm the version update.

(1) Press the [Windows] key to open the Start menu of Windows.



(2) Select [Run...] from the Start menu of Windows, and type ["C:\ProgramFiles\FujiFilm\FCR\Tool\cr346uty.exe"] to open the MAINTENANCE UTILITY, and start M-Utility.

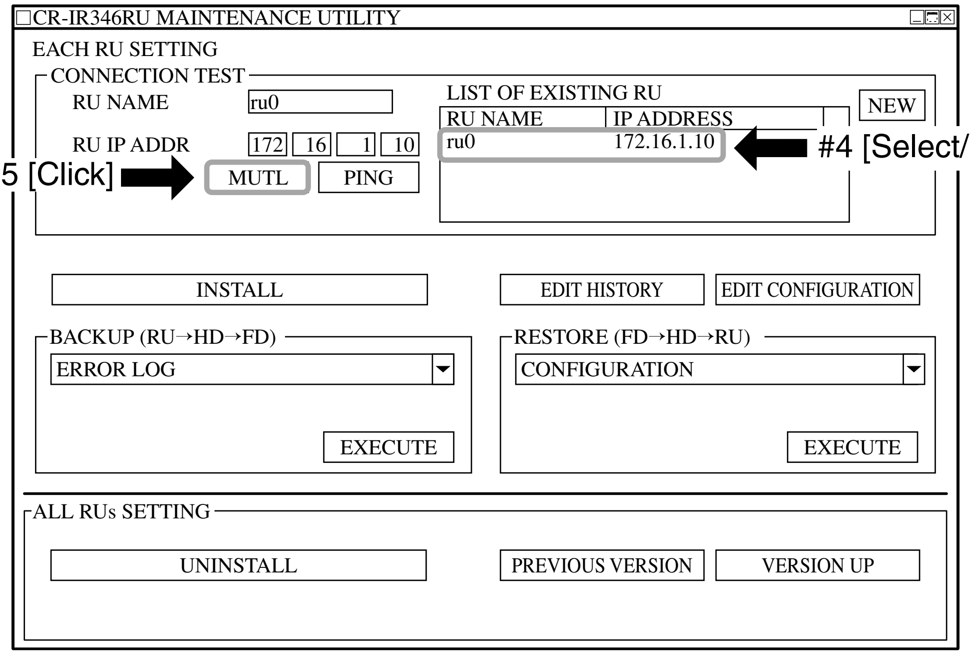

Windows 2000 Professionel
Windows Update
Programs (P)
Favorites (A)
Documents (D)
Settings (S)
Search (C)
Help (H)
Run...
Log Off Administrator (L)...
Shut Down (U)...
#1
[Click]
Run
?
#2 [Type]
#3 [Click]
OK
Cancel
Browse...

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: "C:\ProgramFiles\FujiFilm\FCR\Tool\cr346uty.exe"

FR6H4982.EPS

RU SERVICE UTILITY screen



☐CR-IR346RU MAINTENANCE UTILITY
EACH RU SETTING
CONNECTION TEST
LIST OF EXISTING RU
NEW
RU NAME
IP ADDRESS
MUTL
PING
INSTALL
EDIT HISTORY
EDIT CONFIGURATION
BACKUP (RU→HD→FD)
RESTORE (FD→HD→RU)
EXECUTE
EXECUTE
ALL RUs SETTING
UNINSTALL
PREVIOUS VERSION
VERSION UP

RU NAME: ru0

RU IP ADDR: 172 . 16 . 1 . 10

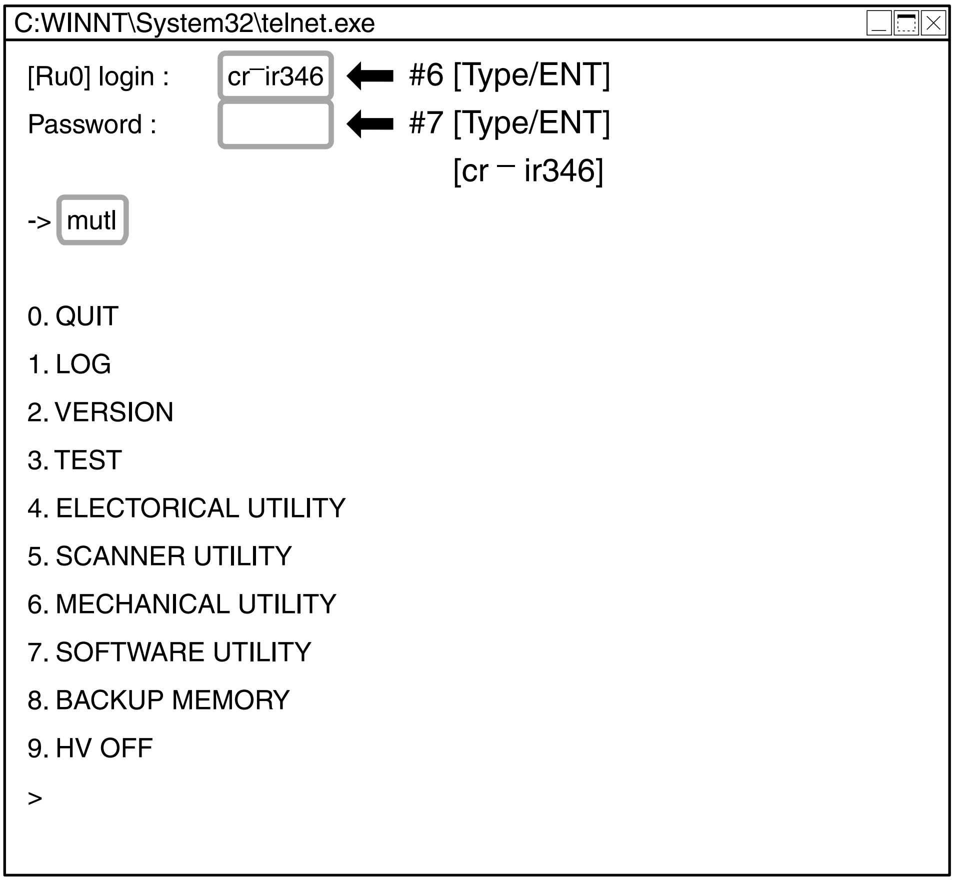
LIST OF EXISTING RU: ru0 172.16.1.10

BACKUP (RU→HD→FD): ERROR LOG

RESTORE (FD→HD→RU): CONFIGURATION

#4 [Select/Click]

#5 [Click]



```
C:WINNT\System32\telnet.exe
[Ru0] login :  cr¯ir346
Password :

-> mutl

0. QUIT
1. LOG
2. VERSION
3. TEST
4. ELECTORICAL UTILITY
5. SCANNER UTILITY
6. MECHANICAL UTILITY
7. SOFTWARE UTILITY
8. BACKUP MEMORY
9. HV OFF
>
```

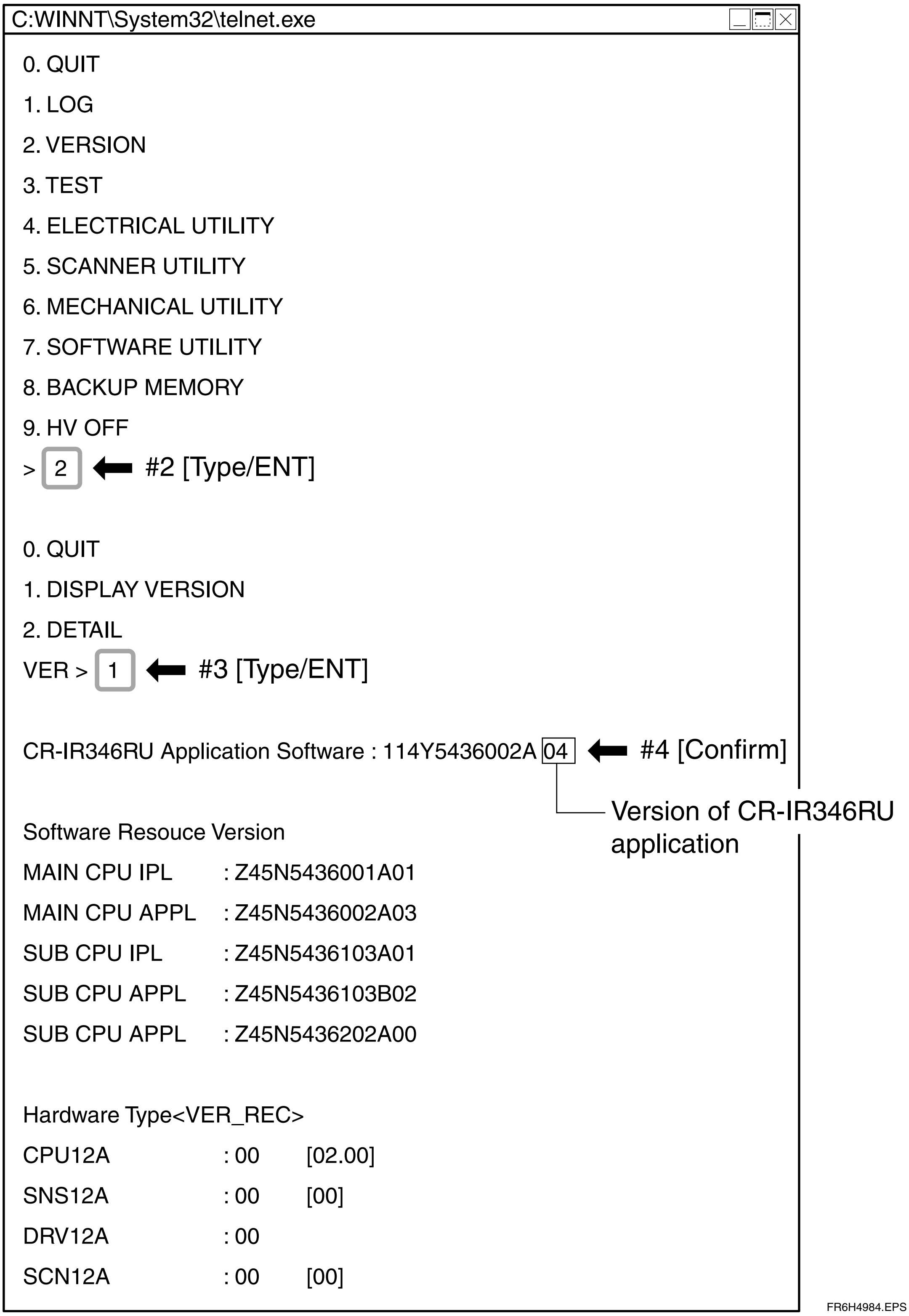
#6 [Type/ENT]

#7 [Type/ENT]
[cr – ir346]

#8 [Type/ENT]

FR6H4983.EPS

(3) Select VERSION to confirm the version of the CR-IR346RU application software.
Example: When the version is updated to A03 or A04



```
C:WINNT\System32\telnet.exe

0. QUIT
1. LOG
2. VERSION
3. TEST
4. ELECTRICAL UTILITY
5. SCANNER UTILITY
6. MECHANICAL UTILITY
7. SOFTWARE UTILITY
8. BACKUP MEMORY
9. HV OFF
> 2

0. QUIT
1. DISPLAY VERSION
2. DETAIL
VER > 1

CR-IR346RU Application Software : 114Y5436002A04

Software Resouce Version
MAIN CPU IPL    : Z45N5436001A01
MAIN CPU APPL   : Z45N5436002A03
SUB CPU IPL     : Z45N5436103A01
SUB CPU APPL    : Z45N5436103B02
SUB CPU APPL    : Z45N5436202A00

Hardware Type<VER_REC>
CPU12A          : 00     [02.00]
SNS12A          : 00     [00]
DRV12A          : 00
SCN12A          : 00     [00]
```

#2 [Type/ENT]

#3 [Type/ENT]

#4 [Confirm]

Version of CR-IR346RU application

FR6H4984.EPS